# INTRODUCTION

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

*(ca. 1910, Mars Hill College 83-6-958)*


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# INTRODUCTION

## PRESERVATION PLAN

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**EXECUTIVE SUMMARY** As the oldest Baptist institution of higher education in Western North Carolina, Mars Hill College has a rich past. Since 1856, the college has strived to educate a diverse student body from the surrounding mountainous area and beyond. Its will to survive and thrive parallels the region's growth from an early agrarian subsistence economy to the diverse economy of the present day.

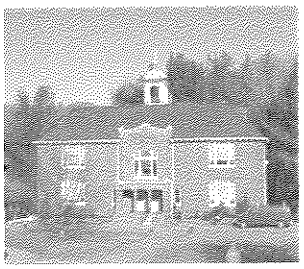
This growth and the college's history are evident today on the school's Quadrangle, the physical and symbolic heart of campus. This green space is ringed in part by the school's eight oldest remaining buildings dating from 1892 to 1935. They are diverse in style, character, and size, but all reflect the best of what local builders and prominent regional architects had to offer and stand as the core of the Mars Hill College Historic District, currently nominated for listing on the National Register of Historic Places.

The purpose of these Preservation Plans for Founders, Spilman, Marshbanks, and Montague Halls; Owen Theatre; Jarrett House; McConnell Gymnasium; and the Robinson Wellness Center are to document and study the present condition of each building and make recommendations for maintenance and improvements while protecting their historic character. This study includes historic information, historic photographs from the college's collection; documentation of existing conditions with floor plans, photographs; and recommendations for repairs and alterations to continue existing or new functions.

All of the buildings are valuable historic resources, are generally in good condition, and are worthy of preservation. All need general repairs due to deferred maintenance, water infiltration, and general aging and alterations to meet current code compliance, meet functional needs, and become more accessible by the disabled. Recommendations are specific to each of the buildings and estimated costs are based upon each building undergoing the full scope of proposed work at one time, as a construction project. A summary of each building is as follows:

**Founders Hall** was originally constructed as the Music Building in 1892 and is now used for faculty offices. Due to significant past renovations, the building is only in need of general repairs to the exterior, with optional work to restore the exterior to its original appearance.
Estimated design and construction costs: $74,553

**Spilman Hall,** constructed as Treat Dormitory for Boys in 1907 with later major additions, is currently used for administrative offices, faculty offices, classrooms, storage, and shop space for the theater department, an apartment, and sandwich shop. Partially underutilized due to the building's condition, a full rehabilitation is proposed to adapt the building for use as a Conference Center with guest and meeting facilities.
Estimated design and construction costs: $4,750,620

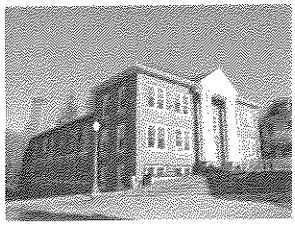


**Marshbanks Hall**, formerly Moore Administration Building, was completed in 1910, with classrooms and office space, is the iconographic symbol of the College. Work includes adding disabled access to all floors with an elevator, a fire-stair, and new restrooms as well as exterior repairs.
Estimated design and construction costs: $909,590

**Montague Hall** was built as the main library on campus in 1918 and was expanded in the 1930s. It currently houses the Rural Life Museum. Alterations and repairs are recommended for continued use as a museum as well as for use as the Madison County Visitor's Center.
Estimated design and construction costs: $347,295

**Owen Theatre** was constructed in 1919 as the Mars Hill Baptist Church and later became Owen Theatre in1968 after it came under college ownership. This conversion and subsequent hard use by both the theater department and summer theatre has been rough on the building. Repairs are needed throughout both the interior and exterior, with updated electrical systems and theatrical rigging. Additional support facilities are needed for both the comfort of patrons and for staging productions. Two additions are proposed: one includes a lobby, ticket office, and adequate restrooms and the other includes a set shop directly behind the stage and additional storage.
Estimated design and construction costs: $1,737,450

**Jarrett House** was originally the pastorium for the Mars Hill Baptist Church and is a residential bungalow from about 1920. It has been used in the past for Campus Security offices and is currently assigned to the theater department.
Estimated design and construction costs: $75,000



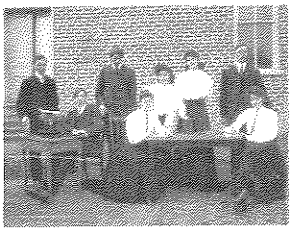
**McConnell Gymnasium** included classrooms and a gymnasium with a suspended running track in 1924. It is now used for offices, student activities, and studio space for the Bailey Mountain Cloggers. General repairs and upgrades to accommodate accessibility with an elevator and updated restrooms are recommended.
Estimated design and construction costs: $1,267,480

**Robinson Wellness Center**, the only building on campus still used for its original function, is the health clinic for the college. This 1935 building has been partially updated on the interior over the past two years, but further work is recommended to meet accessibility code requirements.
Estimated design and construction costs: $434,687

## PARTIAL CAMPUS MAP

1 Founders Hall
2 Spilman Hall
3 Marshbanks Hall
4 Montague Hall
5 Owen Theatre
6 Jarrett House
7 McConnell Gymnasium
8 Robinson Wellness Center

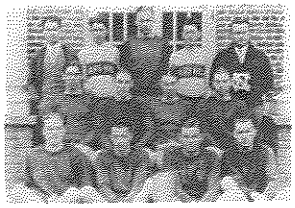
## PROJECT DESCRIPTION



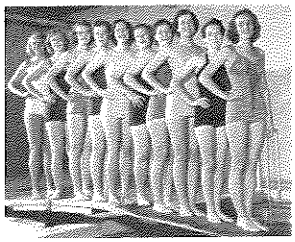
This report is the result of research, study, and analysis of the eight oldest buildings on the Mars Hill College Campus. It was largely funded by the Getty Foundation through the Campus Heritage Grant program that was awarded to the college in 2004 The grant application stipulated four major goals to ensure the integrity of these buildings:

A. Conduct Historical Research on Targeted Buildings
B. Develop Preservation Plan for Targeted Buildings
C. Develop Policy for Institutional Review Process for Work on Historic Buildings
D. Conduct Supportive Educational Activities

Goal B of the grant application outlined the work of the Preservation Plans that are included in this report as follows:

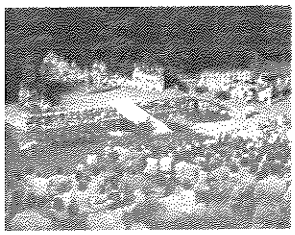


*. . . (Mars Hill College) has made a commitment to preserving our oldest buildings. However while the College's most recent Campus Master Plan (1997) declared the historic quadrangle the physical and emotional heart of the campus and encouraged historic preservation, it provided none of the specific planning information necessary to make informed decisions about the treatment of buildings. Each of the buildings has a long history of deferred maintenance and faces serious challenges of structural stability, changing usage, moisture damage, accessibility, energy inefficiency, and lack of fire protection. The Preservation Plan will be developed by our architecture and engineering consultants who have experience in similar historic preservation. They will document existing conditions, identify repairs and alterations required to meet current and future needs of the college, and prioritize these needs and estimate their costs. This work is a thorough process involving:*

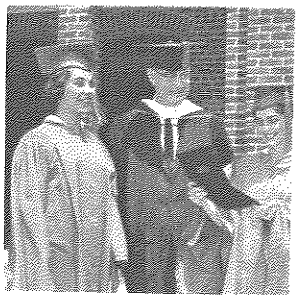


- *Studying and understanding the historic record;*
- *Identifying significant historic features;*
- *Documenting and analyzing existing conditions including architectural, structural, and building systems;*
- *Identifying deficiencies;*
- *Analyzing current building code requirements;*
- *Reviewing current uses, possible proposed uses, and space utilization; and,*
- *Making recommendations for rehabilitation, repairs, and on-going maintenance including cost estimates.*

*A preservation planning team comprised of the project coordinator, the Director of Facilities, and the Historic Resources Subcommittee of the MHC Sesquicentennial Commission will advise the consulting team from the beginning to identify research information to be gathered and to help refine the scope and contents of the Preservation Plan. By the end of the project, our goal is to have a user-friendly, detailed, illustrated Preservation Plan for these eight buildings that will inform day-to-day and long-range management decisions regarding their stewardship. In the absence of such a plan, we have ample evidence of many misguided repairs and "improvements" made to these buildings, which have been either unsightly or ineffective. For example, at some point a ramp was added to Marshbanks Hall that could have been done in a fashion that was much more sympathetic to the design of the building. Aluminum windows replaced the original wood windows on Founders Hall.*



*This Preservation Plan will serve as a vital planning tool, guiding all decisions that are made in the future, both in terms of major rehabilitation projects and on-going maintenance. Building components that remain historically intact may be*



*restored, while other areas with less historical authenticity may be slated for rehabilitation. The Preservation Plan will also be used as a planning tool for capital expenditures.*

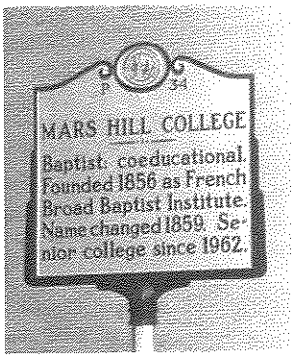
*These tasks are further outlined in the following scope of work for the project, which will be used as the basis for an agreement for services with the prime consultant (architect) on the project.*

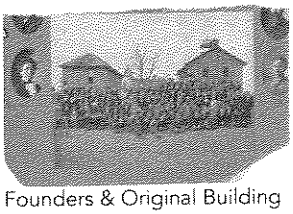
I. *Background Research. Research of existing materials and records regarding the MHC historic district, including primary, secondary, and contemporary sources from the College's collection as well as other regional, state, and national collections.*
   a. *Historic documentation including photographs, drawings, college annuals, and written material*
   b. *Past studies and reports*
   c. *Maintenance, repair, and work records*

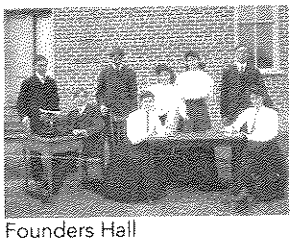
II. *Building Investigation. Investigation, documentation, and analysis of existing building conditions (applies to each of the eight buildings in the district)*
   a. *Measured drawings / CAD generated floor plans*
   b. *Physical condition of architectural and structural materials and identification of deficiencies*
   c. *Identification of historically significant existing and missing features*
   d. *Type and condition of building systems including heating, ventilation, air conditioning, electrical, plumbing, and fire protection*
   e. *Building Code analysis*

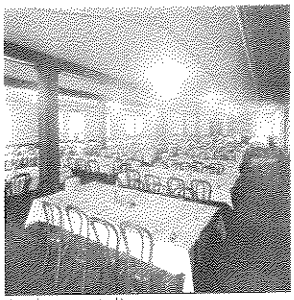
III. *Recommendations.*
   a. *Establish preservation goals and programming requirements for buildings*
      - *Establish periods of significance for each building*
      - *Determine period(s) of interpretation for each building*
      - *Past, current, and anticipated uses*
   b. *Conservation and Schematic Design for building rehabilitation including estimated costs*
   c. *Maintenance plan*

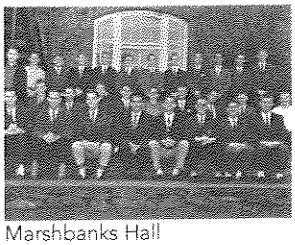
## MARS HILL COLLEGE HISTORY





Founders & Original Building


Founders Hall


Spilman Hall


Marshbanks Hall

By the mid nineteenth century, the Blue Ridge mountains of western North Carolina had been settled and had established homesteads, businesses, churches, and communities that were populated by second and third generation descendants of the original settlers who saw the need for organized education for their children. [1] A group of about 25 Baptist farm families began a movement to establish a school of higher learning and pledged approximately $2,500 and the labor and materials to build it. These families lived in north Buncombe, Madison, Yancey, and Mitchell Counties in North Carolina and in Unicoi County in Tennessee. The location was determined by a gift of four acres of land from Edward Carter, which remains as the center of campus today. Builders Shackleford and Clayton were retained to erect the first building, a two story structure of handmade brick.

This building was completed by the fall of 1856 and the French Broad Baptist Institute opened for a five month session and the trustees named William Albert Gallatin Brown as the first president. W. W. Rollins and Lafayette Logan were the first of approximately 100 students to enroll. The institute served students of all ages and was co-educational with both male and female teachers.

The Philotimean Literary Society was organized during this first session by students for the purpose of promoting literary investigation and improvement in oratory and debate. Weekly debates were organized and students, faculty, trustees, and the president all participated. They debated topics such as the morality of slavery, the education of women, and the continuation of western expansion in the United States.

During this first term the trustees found themselves in litigation with the building contractor for an unpaid debt of $2,500 that grew to $3,000 by 1859. Settlement was forced when a slave named Joe was placed in the Asheville jail as collateral for the debt. The court determined that the actual debt was $1,100 and eleven of the founding families divided the debt to liberate Joe and save the school.

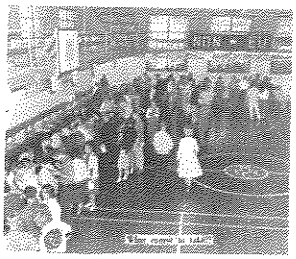
Objection was soon raised about the length of the school's name and it was renamed Mars Hill at the suggestion of founding trustee Lewis Palmer, which is derived from the book of Acts in the bible. The new name was used as early as 1858 and Mars Hill College was chartered in 1859 by the NC General Assembly. The school grew steadily and mostly constructed wood frame buildings with a rural character.

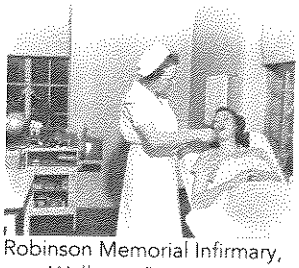
Many of the wood buildings were lost during the Civil War due to alternating occupancies of the area by Confederate and Union troops. The original 1856 building survived, however, but the school was slow to recover. Another brick classroom building was constructed as the Music Building in 1892, which survives as Founders Hall today.

With the arrival of Dr. Robert Lee Moore (1870-1949) as president in 1897, the college undertook a building program which essentially replaced its conventional 19th century fabric. During his 40 year tenure, he effectively transformed the small struggling mountain school into a viable, respected junior college, shaping and reshaping its curriculum in tandem with a construction program which physically reflected the school's steadily rising fortunes. An important part of his ambition was focused on the design and appearance of the college buildings. To realize his goal of an imposing campus, appealing to students, parents, and teachers alike, he departed from precedent and initiated the practice of engaging talented architects to design each of the buildings erected during his term. This practice and the length of his presidency assured a consistency of scale and harmony that defines the historic fabric of the campus today.

Mars Hill Baptist Church, now Owen Theatre

Montague Hall


McConnell Gymnasium


Robinson Memorial Infirmary, now Wellness Center

Although no buildings built prior to 1892 remain today, the buildings erected after 1892 and prior to World War II stand as a group of handsome educational buildings in remarkable harmony and integrity, reflecting the procession of architectural styles used for academic buildings in the state. The majority of the buildings are the work of leading regional architects. These buildings continue to serve the college and remain as the largest and oldest collection of educational buildings associated with college-level education in western North Carolina.

Mars Hill College became a senior college in 1962 and is a private, co-educational liberal arts institution with about 1300 students today. It is the oldest Baptist institution of higher education and is also distinguished by having the most racially diverse campus in the region.

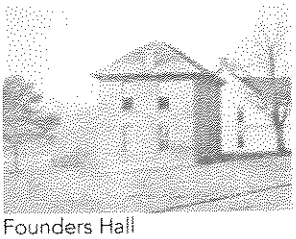
The college has frequently taken stands that were unconventional for Baptists and the South. Its founding as a co-educational institution in 1856 was extremely unconventional. Beginning in the 1930s, MHC hosted the annual Interracial Ministerial Association Conference when few places in the South would welcome such a conference and in 1961 it was North Carolina's first private college to integrate its residential program. The college cherishes its heritage of encouraging diversity and providing a high quality education to first generation and low-income students.

The college is also a steward of Appalachian culture through the Ramsey Center for Regional Studies which houses an extensive archival collection, the Rural Life Museum, and a regional studies academic program. The founder of America's very first folk festival, Bascom Lamar Lunsford, was born and raised on the campus, and ultimately left the college his collection of banjos, his enormous scrapbook, other documents, and ballads he had transcribed by hand from the Southern Appalachian Mountains. He was so passionate about collecting mountain folk music that his is the Library of Congress' largest single collection. Each October, the college honors his legacy with the only folk festival he allowed to use his name.

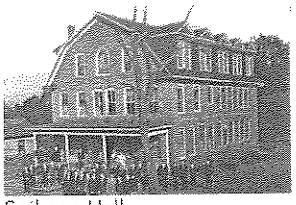
Today the campus includes 194 acres with 38 buildings and others under construction. At its center is the historic quadrangle with the eight oldest buildings that are included in this study. While the quadrangle's features and character have changed over time, it remains both the physical and symbolic heart of the campus.

## ARCHITECTURAL HERTITAGE

The architectural heritage of Mars Hill College is rich, especially considering its rural location and mountain character. The college has been blessed with leaders who built for the future and with a sense of permanency.


Founders Hall

The earliest buildings reflected their use and the skills of the available craftsmen: residential buildings were usually frame and were often either single family houses or boarding houses while the two earliest academic buildings were brick. All of the buildings on campus were built economically and with simplicity, in part a reflection of a regional subsistence economy, the college's association with the Baptist Church, and in part due to tight construction budgets.


Spilman Hall

The first two buildings were side-by side and created a campus center between them. This grew into the Quadrangle that remains as the center of campus today, with flanking and neighboring academic and residential buildings.

Little is known about the architectural design of the two earliest academic buildings: the Original Building built in 1856 (removed 1910) and the Music Building (now **Founders Hall**) in 1892. Both were simple two-story masonry buildings with modest exterior detailing. The Original Building had a wood framed cupola and the eaves of Founders Hall were detailed with paired brackets. The interior appearances of both are mostly lost to history.

Marshbanks Hall

The construction of Treat Dormitory for Boys (now **Spilman Hall**) in 1907 was the first masonry dormitory building. While it is not know who designed this building, it is a handsome brick Dutch Colonial with stylish character. The Robert Lee Moore Administration Building (now **Marshbanks Hall**) soon followed in 1910 and was designed by a prominent Knoxville architect, M. E. Parmalee. This building remains today as the symbolic center of the college and its cupola is part of the official seal, although it is no longer used as the main administration building.

Montague Hall

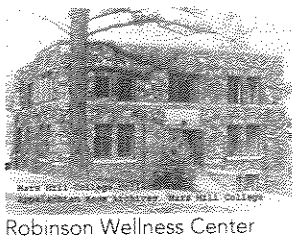
The other buildings in this study followed in steady succession and shaped the perimeter of the Quadrangle, leaving a legacy of architectural styles and a few buildings designed by other prominent regional architects. **Montague Library** was built in 1918 from local uncut stone in a style mimicking the famous Grove Park Inn (1913) in Asheville, North Carolina. The Mars Hill Baptist Church (1918), however, was designed by the same architect as Marshbanks Hall and is also traditional in character. Used by both the college and the local congregation, the church was replaced by another, larger structure in 1953 and became **Owen Theatre** in 1968. The church's pastorium, **Jarrett House** (1920 or after), is also attributed to Parmalee and is a classic example of an Arts and Crafts bungalow.

Owen Theatre

Richard Sharp Smith, an extremely prolific and influential architect from Asheville, designed **McConnell Gymnasium** and died the year it was built in 1924. Smith's legacy includes numerous houses and commercial buildings including the Biltmore House and Biltmore Village as a staff architect for Richard Morris Hunt. While the architectural heritage continues through to the present, the Dr. W. F. **Robinson Memorial Infirmary**, now called the Robinson Wellness Center, is the newest of the eight original buildings included in this study. It was constructed in 1935 and matches the Rustic style of Montague Library.

Jarrett House

McConnell Gymnasium


Robinson Wellness Center

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These have been placed in chronological order, based upon the information available. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available.

Image 1. Ca. 1900. Founders Hall (1892) to the left, then known as the Music Building, and the original building (1856-1910) is to the right. Spilman Home for Girls (1897, now demolished) is beyond. *(MHC Catalogue and Announcement, 1900-1901, frontispiece.)*

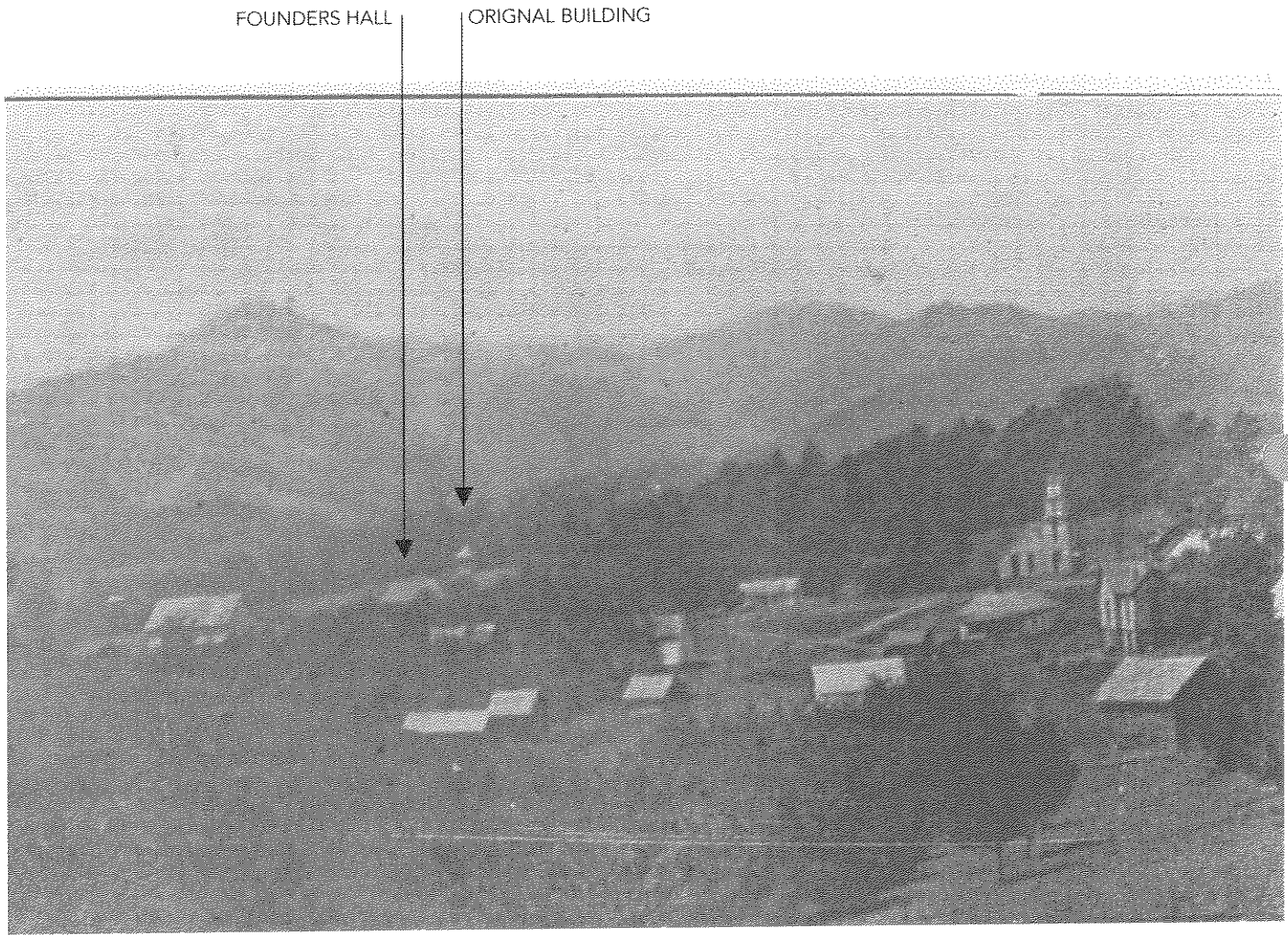



Image 2. View looking north, 1900.

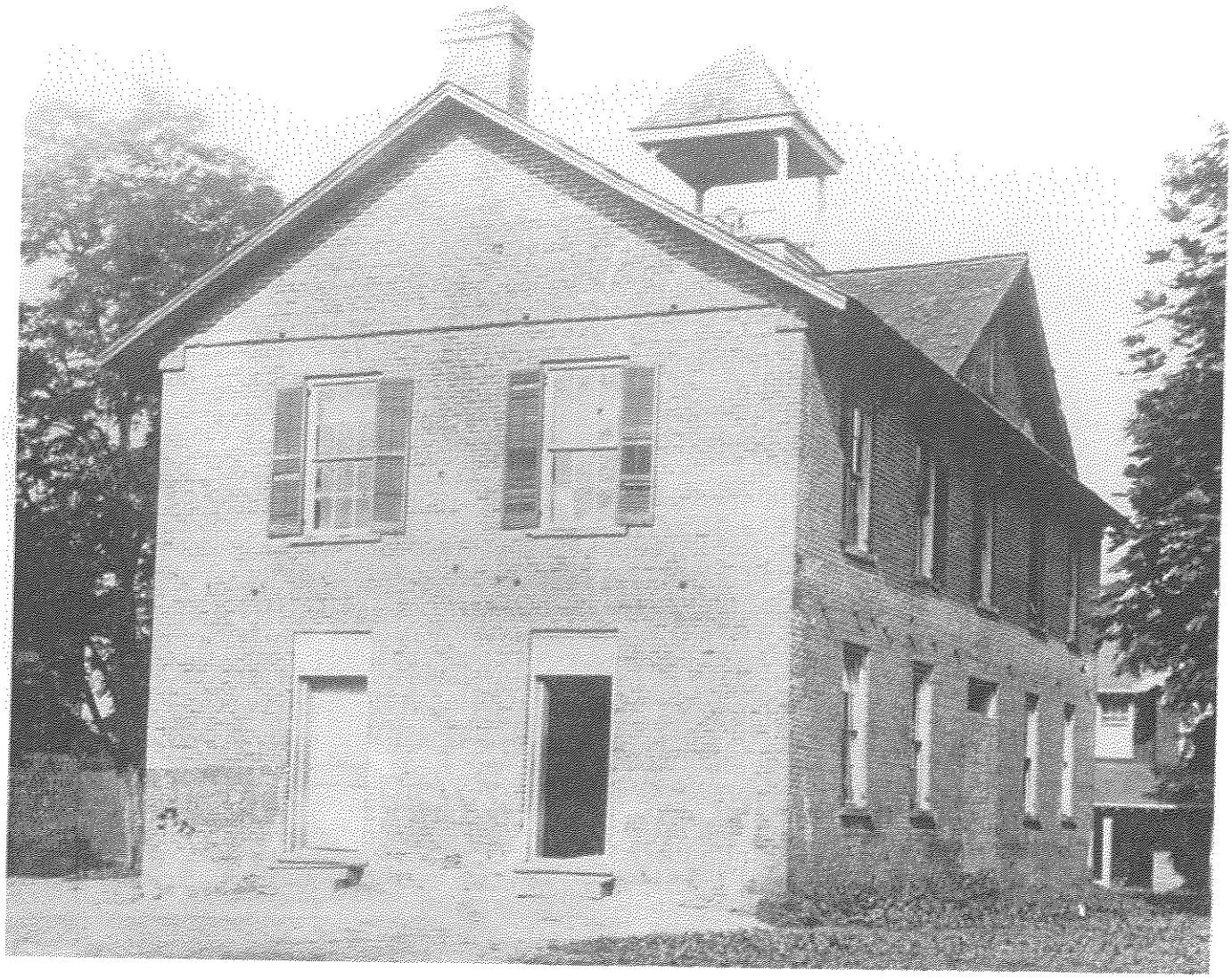


Image 3. Original Classroom Building (1856-1910) which stood to the north of present day Founder's Hall. *(MHC DN-027f)*

Image 4. "Old Soldiers – Meeting at Mars Hill-Front (East) Old Building." Drums read: Geo. W. Gahagan Post No. 38. *(MHC 83-6-128)*

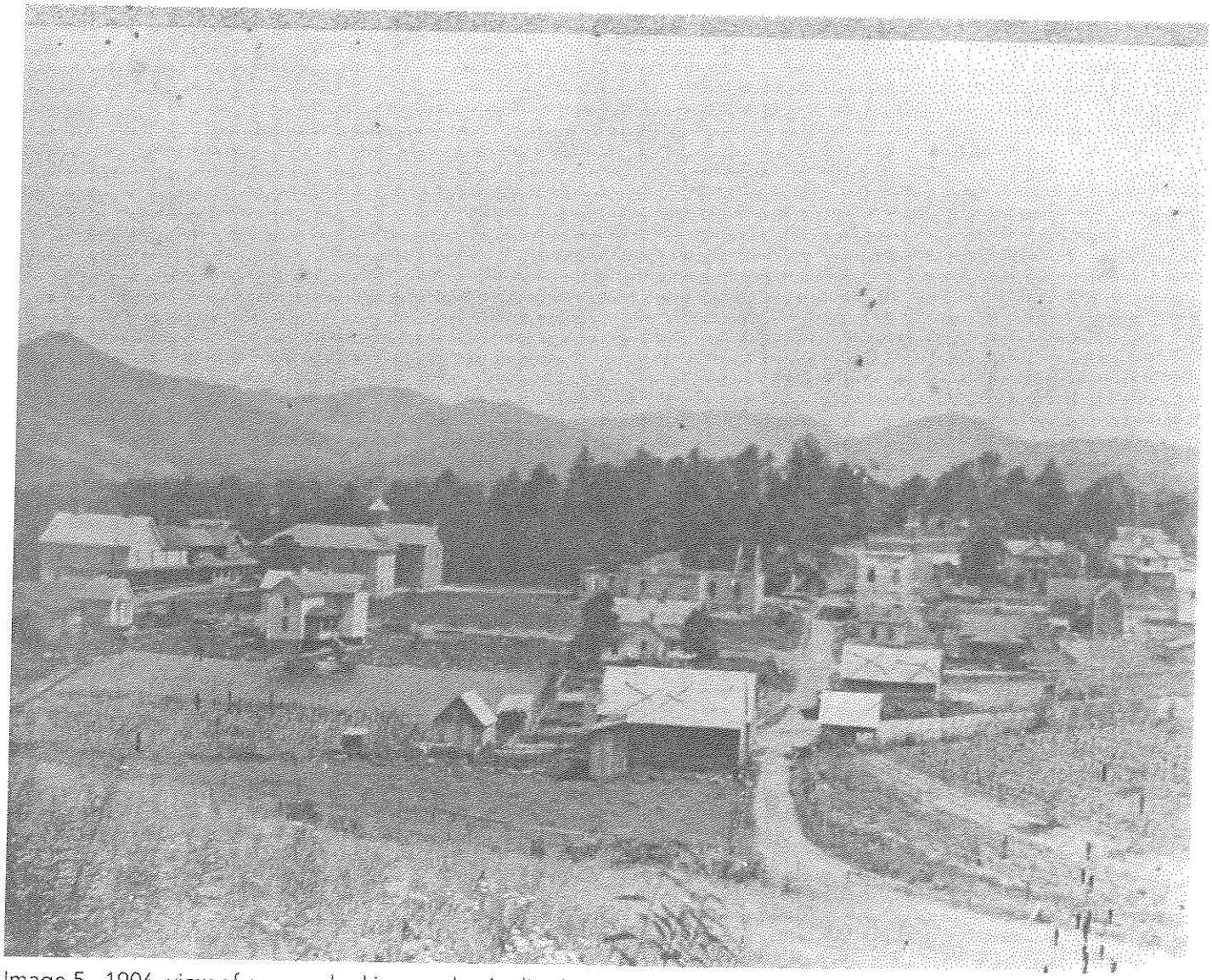


Image 5. 1906, view of campus looking north. Auditorium Building (1906-1961) is under construction which dates the photo. *(MHC Quarterly, 1909-1910, after p.33)*

Image 6. Ca. 1910, view of campus looking north. *(MHC Quarterly, September 1910 and 83-6-958)*

Image 7. View of campus looking north, after 1910 when Marshbanks Hall was constructed and prior to 1918 when Montague Hall was constructed. *(MHC 83-6-844)*

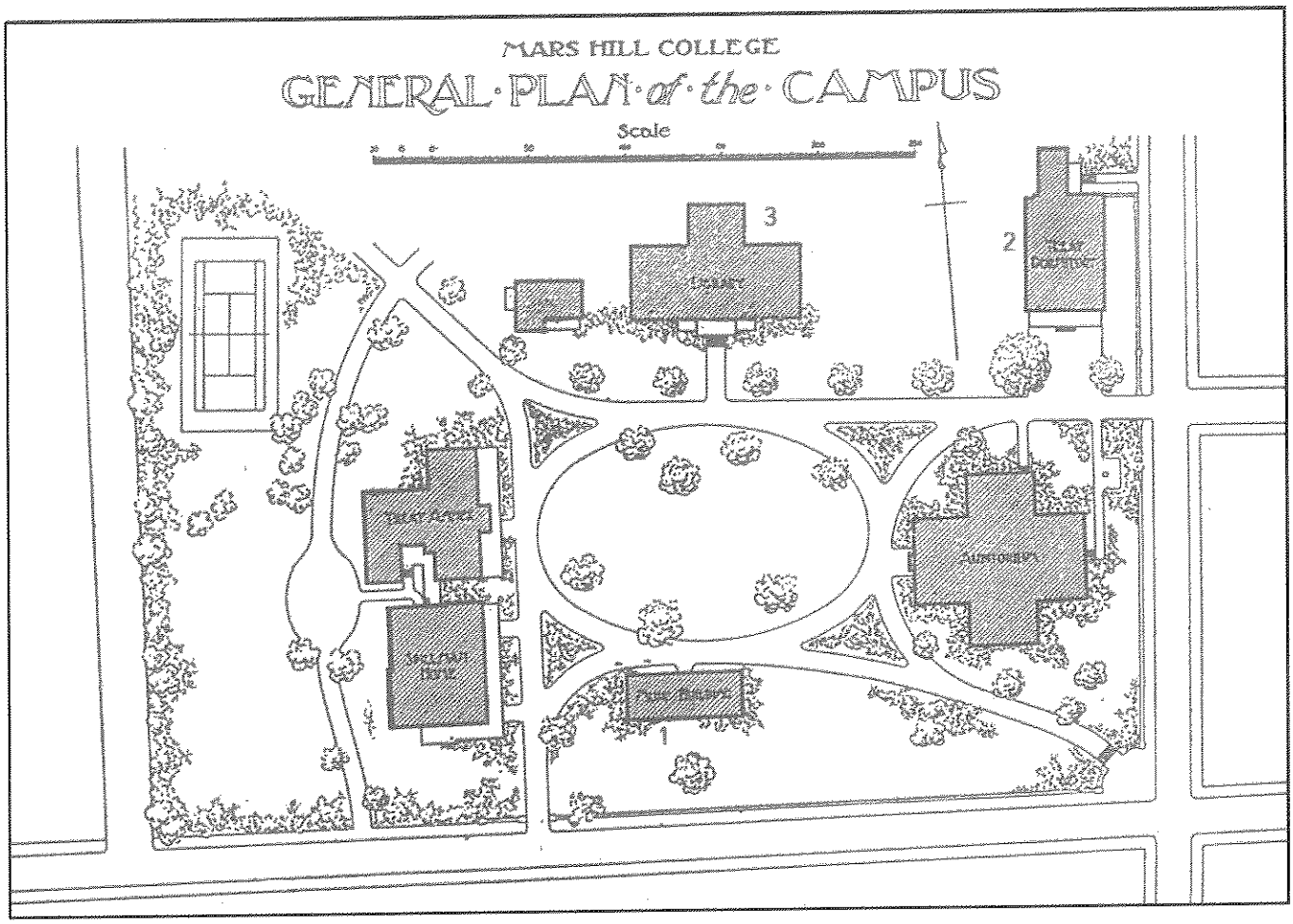



Image 8. 1911, Campus map. *(Mars Hill College Quarterly, 1911-1912.)*

Legend:

1. Founders Hall
2. Spilman Hall
3. Marshbanks Hall

Image 9. Ca. 1912, view of Quadrangle looking east. From left to right other buildings are: Marshbanks Hall (1910), Tip Top House for boys (demolished), Spilman Hall (1907), a house that was to the east of Jarrett House (demolished) and the Auditorium Building (1906-1961). *(MHC Catalogue, 1914-1915, p.14 and MHC Quarterly, September 1912.)*

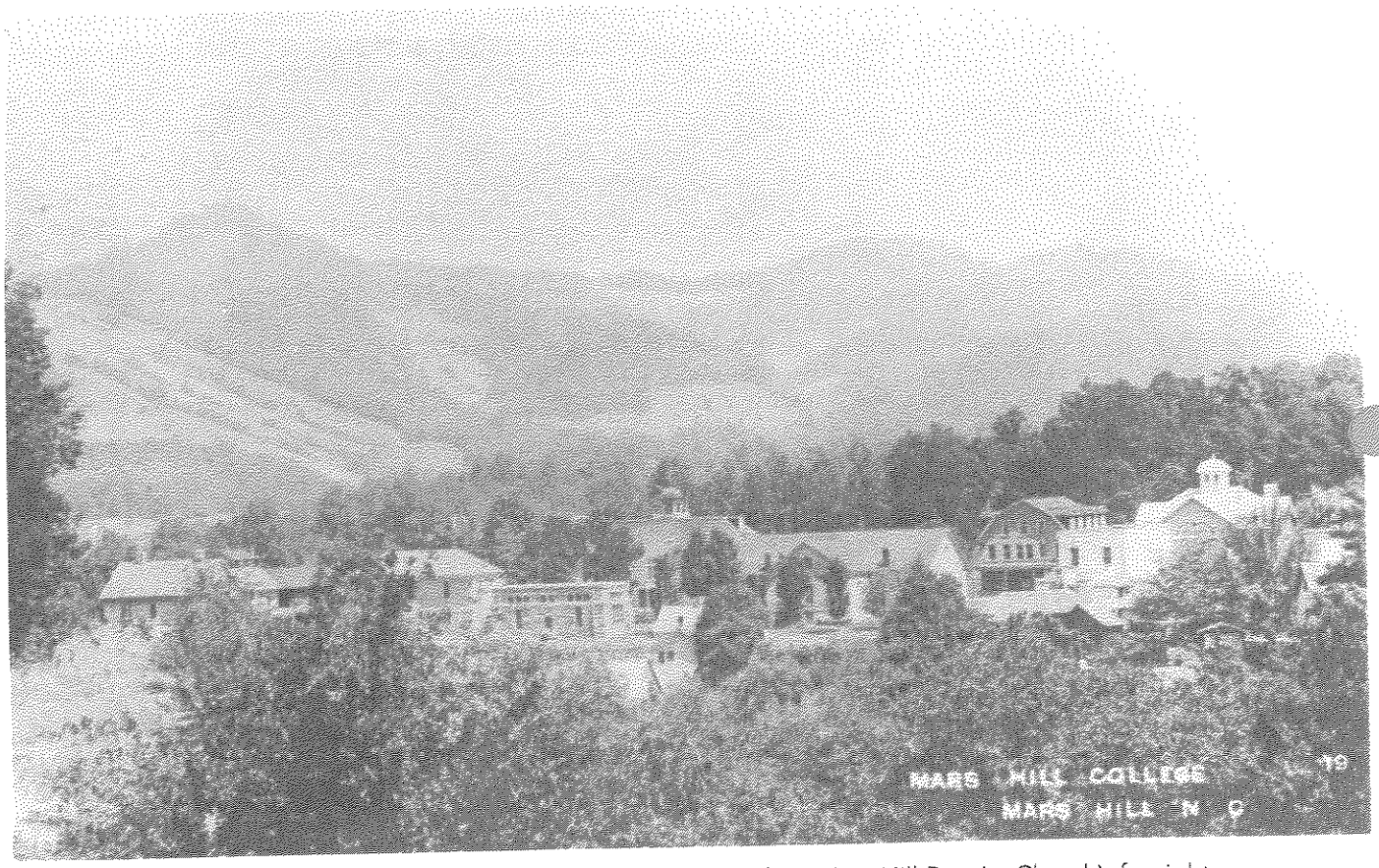



Image 10. 1919, view of campus looking north. Owen Theatre (then Mars Hill Baptist Church), far right, was constructed that year. Note that this photo is prior to any additions to both Spilman Hall and Montague and the construction of Robinson Infirmary and McConnell Gymnasium. *(MHC)*

Image 11. View looking west at former college gate with Owen Theatre, Spilman Hall, and Marshbanks Hall and McConnell Gymnasium. Dating soon after 1924, the date on the gate. *(MHC 83-6-883)*

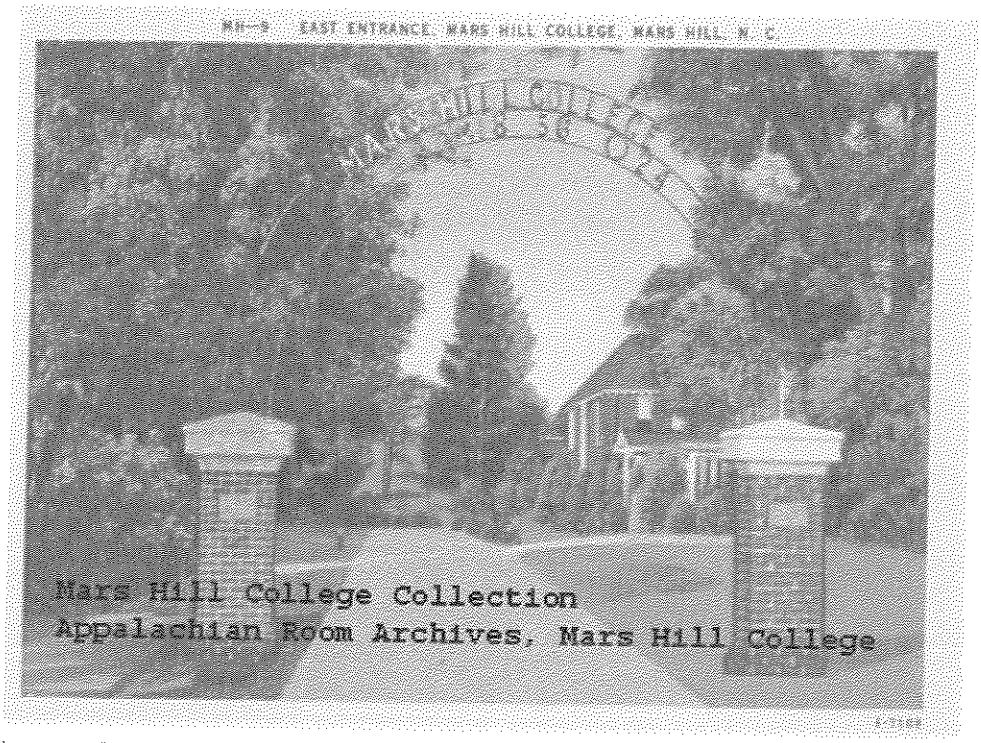

MH-9 EAST ENTRANCE, MARS HILL COLLEGE, MARS HILL, N. C.
Mars Hill College Collection
Appalachian Room Archives, Mars Hill College

Image 12. Hand colored postcard of the College Gate, undated. Note that the gate was altered to include the found date of 1859. *(MHC gate copy)*

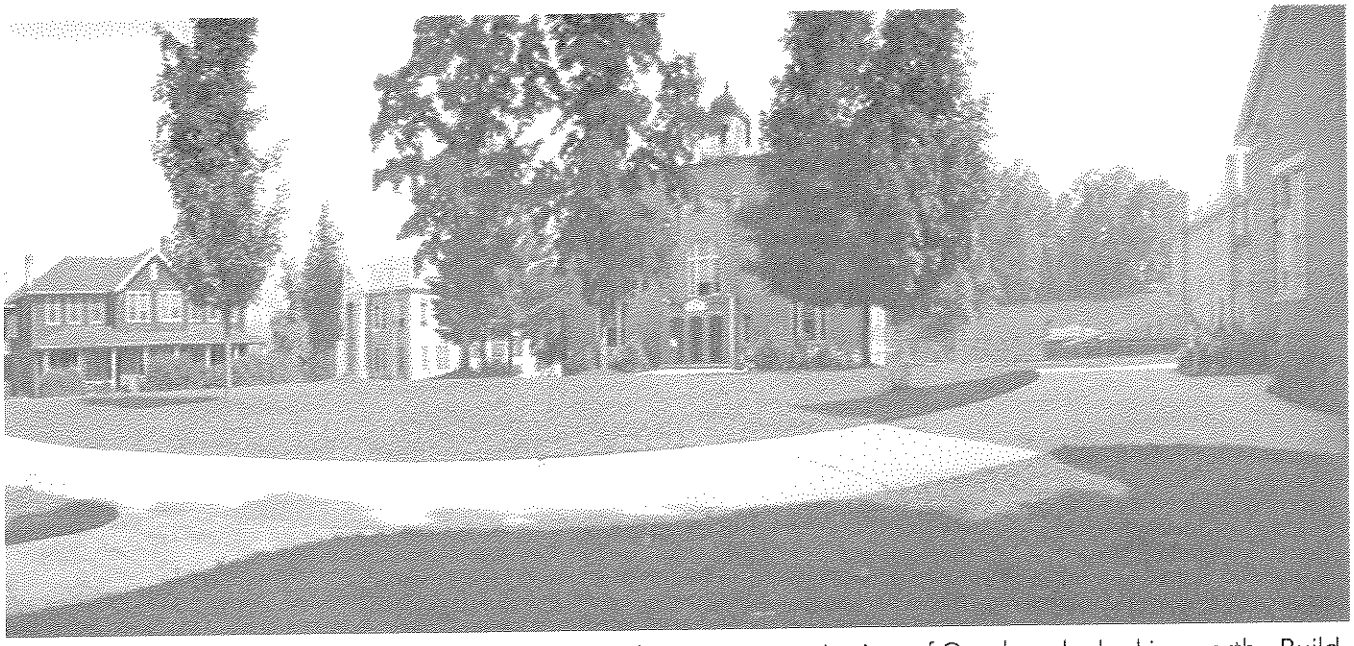


Image 13. ca. 1924-1961 as dated by the buildings shown, panoramic view of Quadrangle, looking north. Buildings left to right are : Treat Annex (1906-1977), McConnell Gymnasium (1924), Marshbanks Hall (1910), rear portion of Spilman Hall (1907 with later additions) and a corner of the Auditorium Building (1906-1961). *(MHC)*

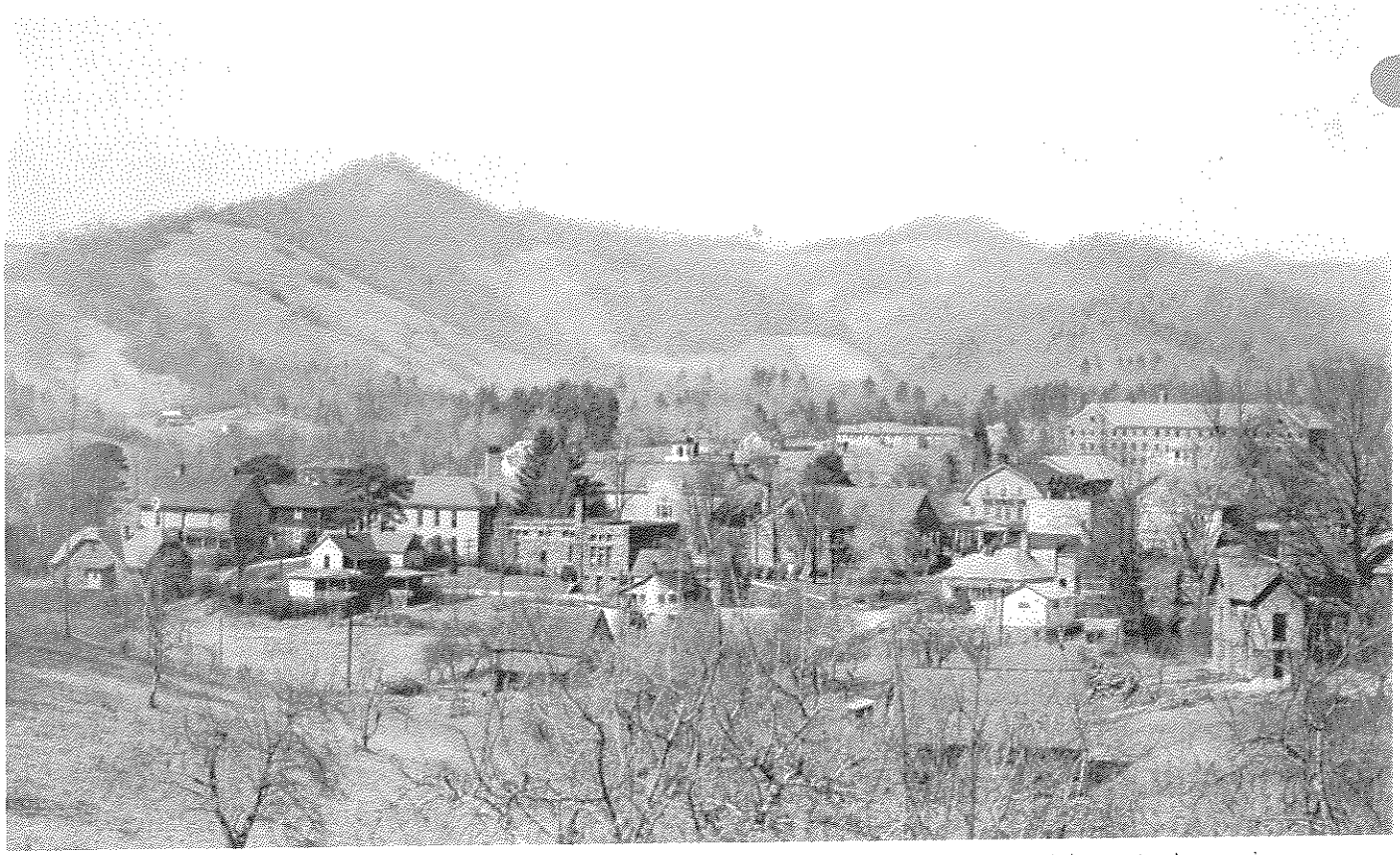


Image 14. Ca. 1930 to 1935, view of campus looking north. The addition to Montague Library is shown, but Robinson Infirmary is not constructed as yet. *(MHC 83-6-468)*

Image 15. Early 1930 prior to 1935, view of campus looking north. *(MHC 83-6-874)*

Image 16. View of campus, looking east, ca. 1941. *(MHC)*

Image 17. 1941, "Mars Hill College with Bailey Mountain in the background." The map is not quite accurate as the house drawn on the site of Jarrett House is the house that predates it, but the map also shows buildings from the 1930s, such as Robinson and the addition to Montague Library. See inset below. *(Mars Hill College Quarterly, March 1941, frontispiece.)*

Legend:

4. Founders Hall
5. Spilman Hall
6. Marshbanks Hall
7. Montague Hall
8. Owen Theatre
9. Jarrett House
10. McConnell Gymnasium
11. Robinson Infirmary

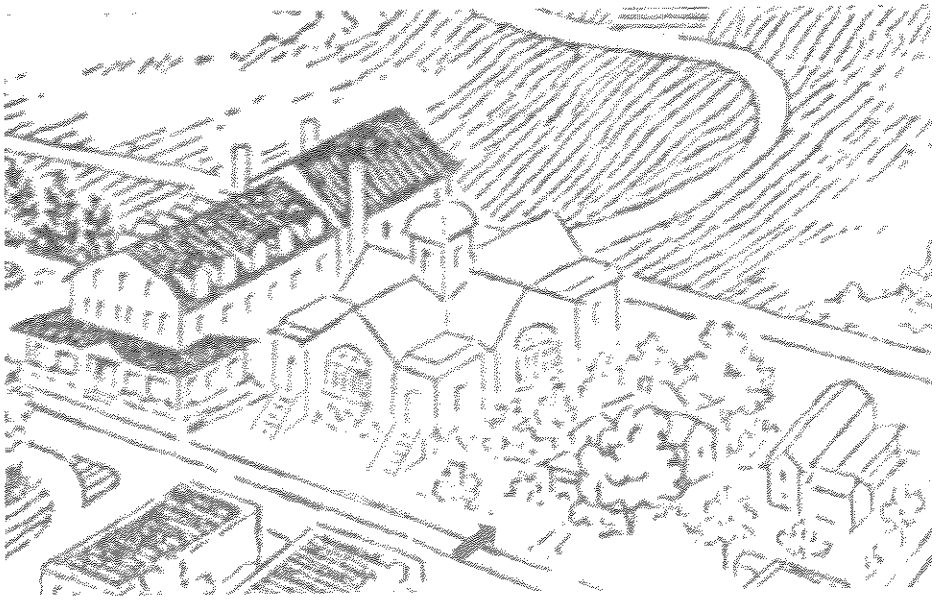


Image 18. 1955, view of campus looking north. *(MHC DN-027b and DN-216)*

Image 19. 1947 view of gate, looking west. *(The Laurel, 1947)*

Image 20. 1955, view of campus looking northwest. *(MHC DN-027b)*

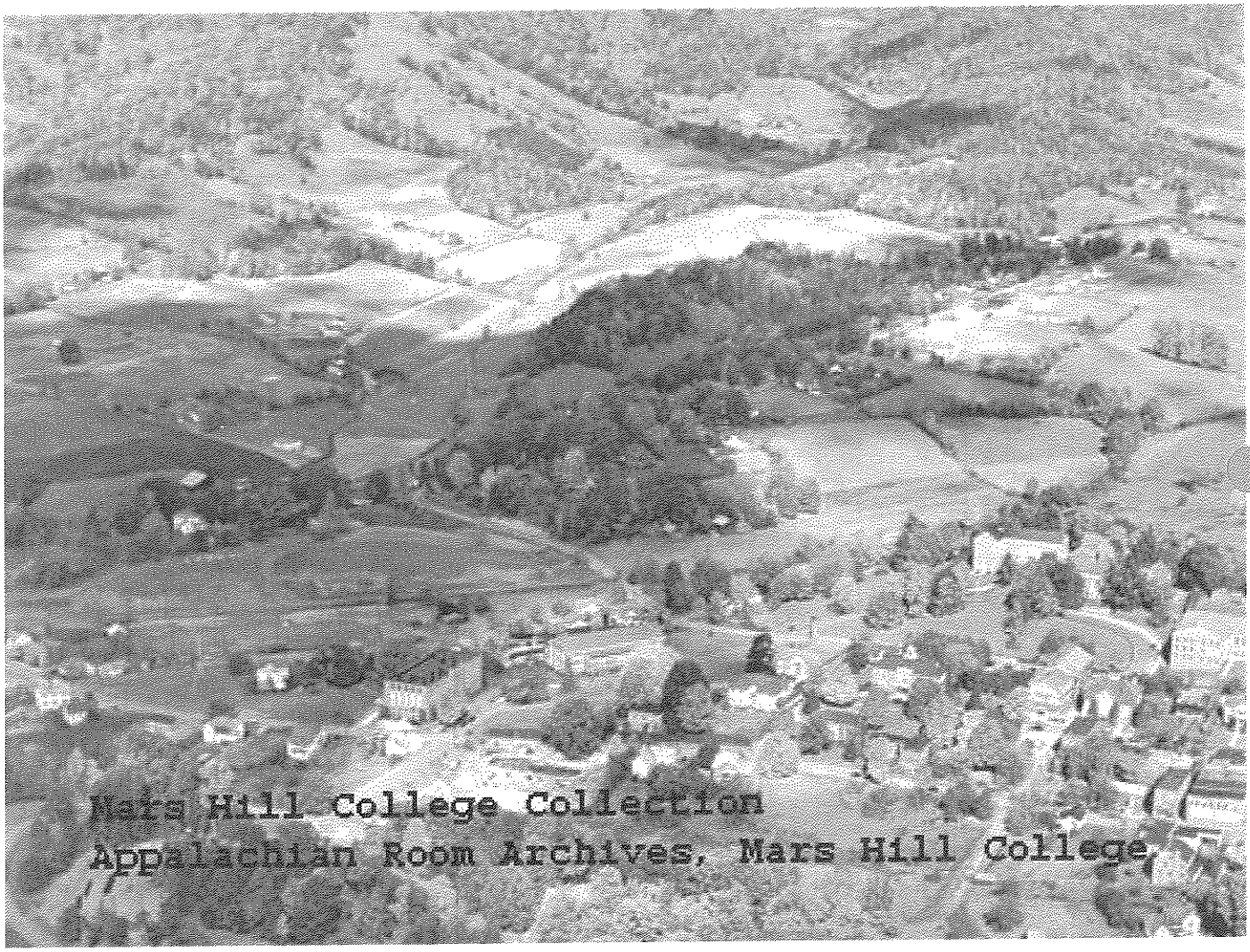



Image 21. 1955, view of campus looking northwest,1955. *(Mars Hill College (1955) copy)*

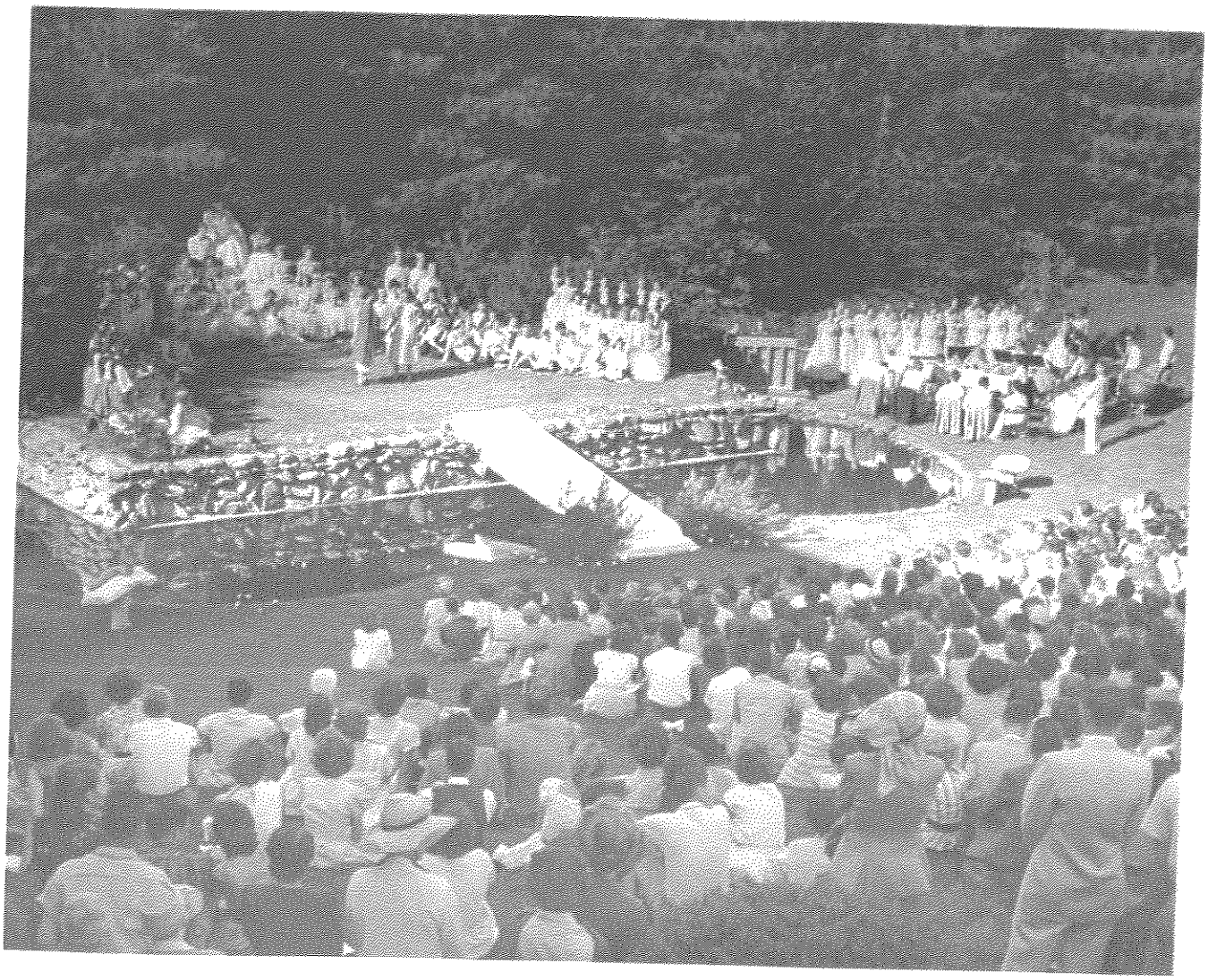
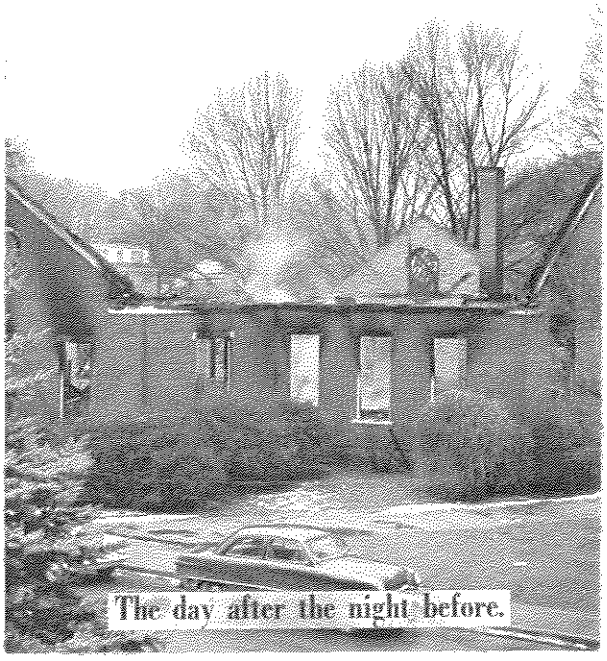


Image 22. May Court in the Anderson Amphitheater, undated. *(MHC DN-unnumbered-j)*




Images 23 and 24. Auditorium Building after it was burned by an arsonist in 1961. Spilman Hall and Owen Theater are in the background. *(MHC DN-unnumbered-k and DN-BOX-9)*

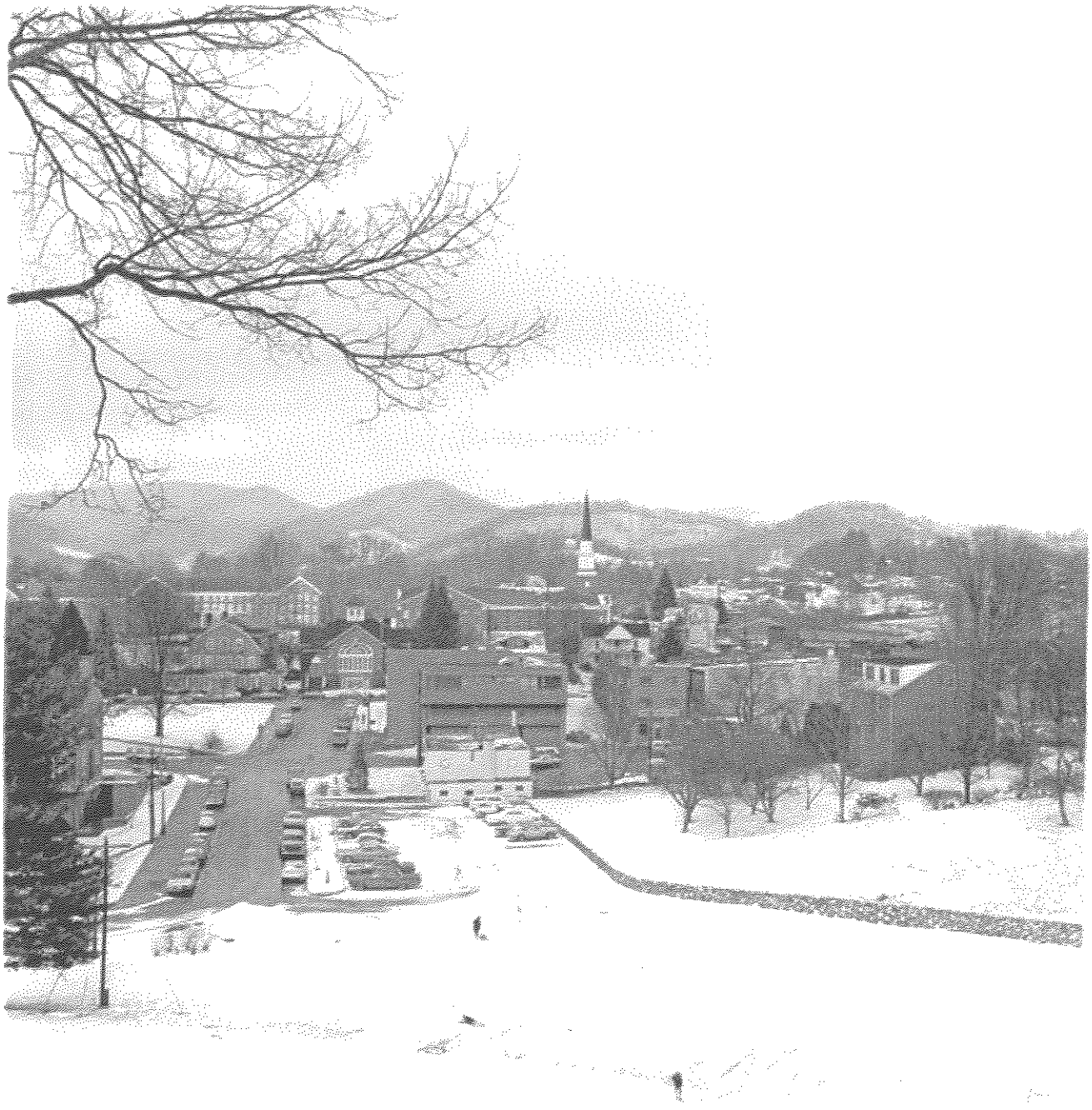


Image 25. 1970s (?), view of campus looking north. *(MHC DN-214b)*

## NATIONAL REGISTER OF HISTORIC PLACES

In 2002, college leaders agreed to apply for designation of a historic district to be included on National Register of Historic Places. The nomination is nearing completion and designation is anticipated in 2006. The eight historic buildings in this report are all contributing buildings within the proposed district.

The significance of the Mars Hill College Historic District is statewide in the area of architecture and as the earliest surviving complex of buildings erected for higher education in western North Carolina and for their high, harmonious character, which imparts a distinct personality to the campus.

The National Register was established with passage of the National Historic Preservation Act in 1966 to protect and recognize historic properties. It is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. The National Register is administered by the National Park Service, which is part of the U.S. Department of the Interior.

Listing on the National Register is primarily honorary. It does provide protection in the event that public funds, both federal and state, are spent on a project that would impact the historic resource. Listing also provides some benefits, such as eligibility for the Investment Tax Credit Program, which are not directly applicable to Mars Hill College as it is a private, non-profit organization. It may, however, be possible for MHC to partner with other organizations that can take advantage of this program.

## HISTORIC PRESERVATION STANDARDS

The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring and Reconstructing Historic Buildings are intended to provide guidance to historic building owners and building managers, preservation consultants, architects, contractors, and project reviewers prior to treatment. While not specifically required for work on historic buildings at Mars Hill College, these standards are used widely and are the best set of standards to follow for any type of preservation project.

While the guidelines provide guidance for a variety of project approaches, rehabilitation is the appropriate approach for the buildings included in the study. Rehabilitation is defined as "*the act or process of making possible a compatible use for a property through repair, alterations and additions while preserving those portions or features which convey its historical, cultural, or architectural values.*"

The Secretary of the Interior's Standards for Rehabilitation are as follows:

1. *A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.*

2. *The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.*

3. *Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.*

4. *Changes to a property that have acquired historic significance in their own right*

*will be retained and preserved.*

5. *Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.*

6. *Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.*

7. *Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.*

8. *Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.*

9. *New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.*

10. *New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.* [2]

The intent of the Standards is to assist the long-term preservation of a property's significance through the preservation of historic materials and features. All of the recommendations presented in this report and any subsequent recommendations for rehabilitation should be filtered through the Secretary's Standards to ensure that the proposed work preserves the historic and architectural integrity of these significant buildings.[3]

## BUILDING CODES

Three building codes are currently in effect for use in North Carolina for existing buildings, and while these cannot be combined, all should be studied for the best overall approach to application for a project. These are:

- **2002 North Carolina Building Code** is based on the International Building Code with specific North Carolina revisions. This code is used primarily for new construction projects and will have new revisions effective July 1, 2006.

- **Chapter 34 – Existing Buildings of the 2002 NC Building Code** allows a scoring system that balances acceptance of certain existing conditions with the introduction of safety features such as sprinkler systems and smoke and fire alarms.

- **2006 North Carolina Rehabilitation Code**[4] became effective statewide as of January 1, 2006. This code has been in effect in certain jurisdictions in the state as a pilot code for several years. It is considered a "new generation" of building codes as it approaches an existing building project in a more comprehensive manner.

Other codes about specific building requirements must be used in conjunction with all of these codes and include the Accessibility, Energy Conservation, Fire , Fuel Gas, Mechanical , and Plumbing Codes, with revisions effective July 1, 2006. The most significant of the 2006 revisions as they relate to the buildings at Mars Hill College are the plumbing requirements for the number of fixtures. The revisions require fewer restroom water closets and lavatories for some occupancies.

The Rehabilitation Code has been used for several years in a select number of jurisdictions in North Carolina as a pilot code, but is only now available for use in Madison County. It is a very good approach to the buildings on campus as it is more sympathetic to historic buildings and will potentially allow many original features to remain without alteration. This code also allows work to take place in the building without bringing the entire building up to code.

For most of the buildings included in this study, both the Existing Building Code and the Rehabilitation Code were studied to determine the best approach to the project. It should be noted that the application of the related codes, including Accessibility, Plumbing, Energy, and Plumbing, is required for all applicable codes.

The Rehabilitation Code is friendlier to small rehabilitation projects, encouraging upgrades to buildings and is more flexible for historic building projects. It is a different approach from the standard building codes as "the requirements that apply to a project are based upon the type of work being done rather than on the extent of the work."[5] Proposed work to buildings must be categorized and divided into work areas as listed below[6] and a project can have more than one type of work area, with certain limitations.

*Repair: Repair means to fix a building component or materials that is worn or damaged with a component or materials that is the same or nearly the same. Examples of repair are patching drywall, fixing a stir tread or handrail, and re-roofing. In most cases, the Rehab Code allows a repair to be made with the same materials, "fixing like with like," even if that materials is not longer used in new construction.*

*Renovation: "Renovation" work includes the removal and replacement of interior or exterior finishes, doors, windows, trim or other materials with new materials that serve the same purpose. Renovations differ from repairs in that the replacement is not "like with like," To ensure that the use of these new materials does not make the building less safe, the materials and the methods of installation must comply with the materials standards listed and the installation criteria given in the building code.*

*Alteration: An "alteration" involves reconfiguring interior space by adding or removing walls, doors, stairs or windows, or by changing the height of the ceiling. The primary concern with an alteration project is that it cannot adversely impact egress. An example of an alteration is the expansion of a bathroom where walls are removed.*

*Reconstruction: A "reconstruction" project is a combination of repair, renovation and/or alteration work that is so extensive that the building – or a significant portion of the building – cannot be occupied during the work project. Also, the project may need a Certificate of Occupancy upon completion. One example of a reconstruction project is the "gut rehab" of a row house.*

*Change of Use: A "change of use" involves changing the purpose of – or primary activity in – a building. For example, turning a single-family residence into a theater*

*changes the use of the building. The Rehab Code applies a measure of the relative hazard associated with the proposed use as compared to the existing use to determine whether the change means that the building must be upgraded.*

*Additions: An "addition" is the extension of the area or height of a building. The addition itself must meet code requirements for new construction. The Rehab Code, however, minimizes the amount of work required in the existing portion of the building. The Rehab Code ensures that the addition does not adversely impact the existing portion of the building from a structural, exiting and fire protection standpoint.*

Listing on the National Register qualifies a building for special provisions under section 1.33 – Historic Buildings if the work is consistent with the Secretary of the Interior's Standards. These include the use of historic materials and methods; acceptance of some existing conditions related to fire resistance, stair detailing; corridors, doors; transoms, fire resistance of interior finishes, and ceiling height.

When a building is opened to the public, although it is not a public institution, compliance with the American with Disabilities Act is important. It should be noted, however, that this is a civil law, not a building code. Compliance with the NC Accessibility Code generally brings a building In compliance with ADA.

**ADA Accessibility Guidelines (ADAAG)** are applicable by Title III of the Americans with Disabilities Act (ADA). Two sections that directly apply to Mares Hill College are as follows:

- Sec. 36.104 – Definitions. The college is considered a "place of public accommodation" defined as a "...undergraduate, or postgraduate private school, or other place of education."
- Sec. 36.304 – Removal of barriers. A public accommodation shall remove architectural barriers in existing facilities, including communication barriers that are structural in nature, where such removal is readily achievable, i.e., easily accomplishable and able to be carried out without much difficulty or expense. Removal of barriers is required by the ADA, and is the responsibility of property owners in order to be in compliance with Federal civil rights law. Initiating barrier removal is not within the jurisdiction of the NC Dept. of Insurance or local Code Enforcement Official. Refer to Title III of the Americans with Disabilities Act, Sec. 36.304 Removal of Barriers found at http://www.usdoj.gov/crt/ada/reg3a.html for details.

## HAZARDOUS MATERIALS AND CONDITIONS

Two hazardous materials, lead paint and asbestos, are suspected to exist in the buildings, although no testing as been performed to date.

Lead is a highly toxic metal that was used for many years in paint and other product. Lead based paint that is in good condition or encapsulated under other paint, is not usually a hazard. It is when the paint becomes brittle and chips or becomes air borne that it is dangerous. Paint chips are hazardous in situations where they are handled and eaten by small children and paint dust can also be hazardous as people breathe and get into their systems.

The buildings on the Mars Hill Campus almost certainly contain lead paint, as this was used extensively prior to 1978. Testing can be performed to determine the extent of the problem, but for the purposes of planning, it should be assumed to be on most painted historic surfaces. These surfaces should be treated with care during any repair and rehabilitation work to protect both the workmen and the occupants of the building.

Asbestos is a mineral that was used in building products such as pipe and roof cement, pipe insulating wrap and vinyl floor tile. Like products with lead, asbestos is dangerous when it comes friable and particles become airborne. Asbestos was popular as it is strong, yet flexible, fireproof and a good insulator. Each building should be surveyed to determine the extent of this material and it should either be removed or encapsulated as a first step in any building work.

Mold and mildew is another hazardous condition that is present in some of the buildings. It develops on surfaces when moisture and water are present. It can appear both on visible surfaces and in building cavities, such as walls, crawlspaces, attics, and mechanical ductwork. When the mold is disturbed and made airborne, it can become hazardous to the health of building occupants, especially those with respiratory problems.

Mold and mildew should be prevented by keeping the water out of the buildings, regulating interior humidity levels, and providing proper ventilation. When present, the source of moisture should be eliminated and the mold cleaned with chlorine bleach or similar cleaner. If the problems are extensive, the building should be inspected and treated by licensed professionals.

Sick Building Syndrome (SBS) is yet another serious problem where the interior conditions make the occupants sick. This can be due to inadequate ventilation and chemical and biological contaminants that can include mold. Further information about indoor air quality, mold, and other related building issues can be found through the U. S. Environmental Protection Agency at www.epa.gov/iaq/index.html.

## RESOURCES

**Historic Preservation**

National Park Service www.cr.nps.gov
- National Register of Historic Places
- Preservation Briefs
- Technical Advice

North Carolina State Historic Preservation Office, North Carolina Department of Archives and History www.hpo.dcr.state.nc.us

**Building Codes**

North Carolina Department of Insurance, Office of the State Fire Marshal
www.ncdoi.com/OSFM

**Materials**

Metal Roofing Shingles: Berridge Manufacturing www.berridge.com
Aluminum Interior Storm Windows: Allied Windows www.interiorstorms.com
Masonry Cleaning and Consolidation: ProSoCo www.prosoco.com
Masonry Repair and Repointing: Cathedral Stone Products, Jahn Mortar Products
www.jahnmortars.com

**Notes**

[1] Early history from "Founding of Mars Hill College" by Richard Dillingham, undated. Other information is from the Getty Grant application for this project

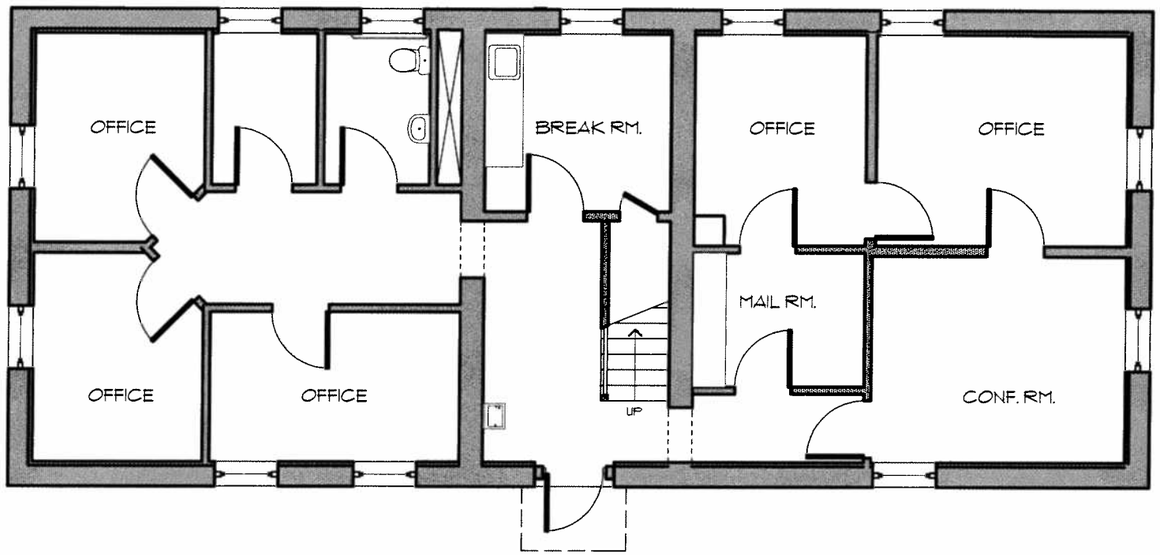
[2] Code of Federal Regulations: Title 36, Part 67, Section 7.

[3] Refer to www.cr.nps.gov for additional information about the Standards.

[4] The entire code is available in .pdf format at www.ncrehabcode.com.

[5] Paragraph 1.1a3, 2006 North Carolina Rehabilitation Code.

[6] "North Carolina Rehab Code," brochure by Mecklenburg County Code Enforcement, www.ncrehabcode.com. Additional information available at this web site as well.




EXISTING
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

N

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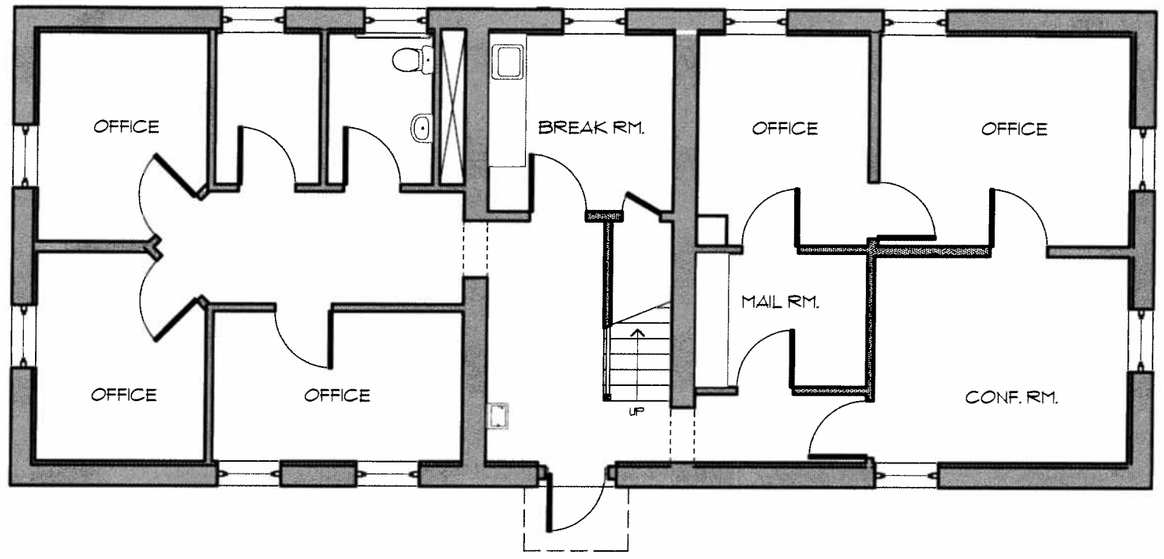
# FOUNDERS HALL
## PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
FIRST FLOOR
PLAN




EXISTING
SECOND FLOOR PLAN
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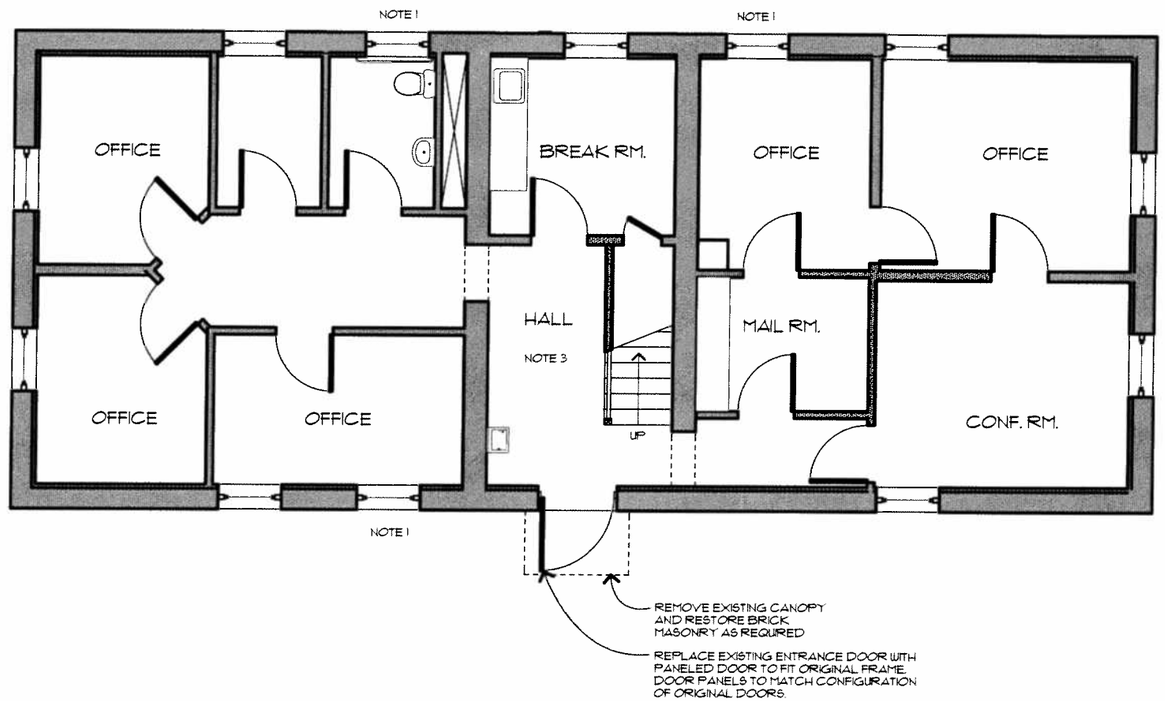
# FOUNDERS HALL
## PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
SECOND
FLOOR
PLAN




## NOTES

1 - REMOVE BRICK SEGMENTAL ARCHES ON LATER WINDOWS AND RECONSTRUCT FLAT LINTLES AS ORIGINALLY CONSTRUCTED.

2 - REPLACE ALL ALUMINUM WINDOWS WITH REPLICA WOOD DOUBLE-HUNG SASH, 2/2 LIGHT TO MATCH ORIGINAL WINDOWS.

3 - RESTORE AND/OR REPLICATE ORIGINAL FINISHES AT STAIR HALL. RECONSTRUCT STAIR BALUSTRADE. REFER TO REPORT FOR DETAILS.

# PROPOSED FIRST FLOOR PLAN

SCALE: 1/8" = 1'-0"

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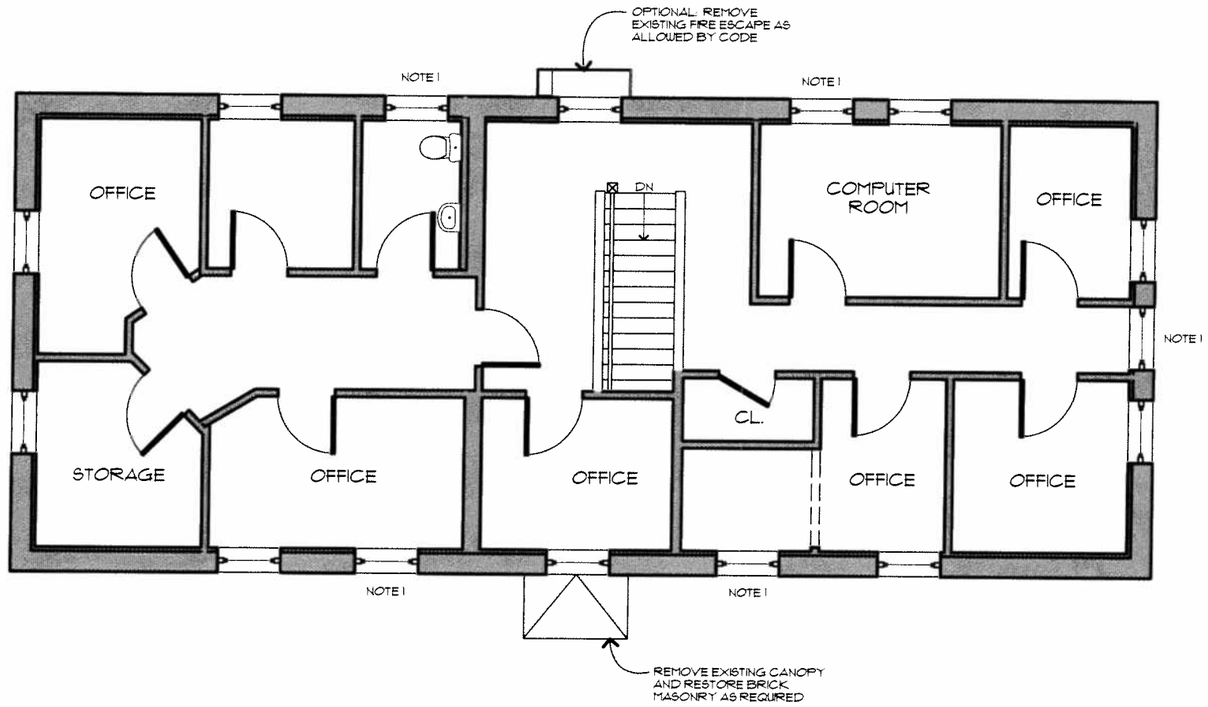
PROPOSED FIRST FLOOR PLAN

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# PROPOSED SECOND FLOOR PLAN

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FOUNDERS HALL
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED SECOND FLOOR PLAN

# FOUNDERS HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

*(Mars Hill College 83-6-968)*


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1 HISTORIC CERTIFICATION

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PROPOSED PLANS

# FOUNDERS HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

## GENERAL INFORMATION

| | |
|---|---|
| **Year Built** | 1892. Interior gutted and rebuilt 1990. |
| **Style** | Vernacular Italianate |
| **Architect** | J. S. Yeodes |
| **Builder** | J. Richard Smith, brickmason |
| **Original Use** | Music Building / Classrooms |
| **Current Uses** | Faculty Offices |
| **Proposed Use** | Faculty Offices |
| **Building Area** | First Floor: 1,336 SF<br>Second Floor: 1,336 SF<br>Total: 2,672 SF interior gross (not including exterior walls) |

## HISTORIC SIGNIFICANCE

The oldest extant building on campus, and the only building surviving from the 19th century. The college's earliest buildings were lost to fire due to alternating Union and Confederate occupations during the Civil War. This building represents the trustee's first construction efforts after the War. Erected in 1892 at a cost of $3,000, the building was renamed Founders Hall in 1976.

## HISTORIC CERTIFICATION

Contributing building, proposed Mars Hill College Historic District, National Register of Historic Places.

## ARCHITECTURAL SIGNIFICANCE

Constructed in a spare, vernacular Italianate style, Founders' Hall is representative of mid- to late-nineteenth century academic buildings in North Carolina. Although it has suffered several unsympathetic alterations, the building retains much of its historical architectural character.

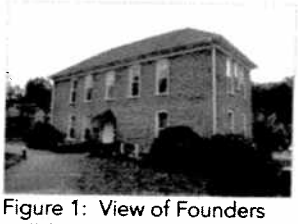

Figure 1: View of Founders Hall from quad.

### Exterior

- Building massing, roof proportions and configuration.
- Handmade brick in six-course American bond pattern.
- Soft lime mortar with penciled joints.
- Original arched window openings.
- Wood door frame and transom at entrance.
- Tongue-and-groove wood soffit with wood bed molding and frieze board.

### Interior

- Stairway in original location and configuration; treads and risers replaced.
- Surviving original trim, including molding at stairway.
- Other original features, including flooring, baseboards, door and window casing that may still be intact under existing remodeling.

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These have been placed in chronological order. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available.

Image 1. Ca. 1900. Founders Hall (left), Spilman Home for Girls, and the original building. (See also Image 1, Introduction.)

Image 2. View of Founders Hall (left) and the original classroom building (right). Printed in the Mars Hill College Catalogue, 1902-1903, p. 24 and labeled "School and Faculty, February, 1902." Photo plate is complete in the publication additional faculty at the top. *(MHC 83-6-33)*

Image 3. Ca. 1990s, group on south side of Founders Hall. Marked with "Photo by Sherrill, Waynesville, NC" on the photo and "Mars Hill College Students" by hand. *(MHC 83-6-968)*

Image 4. 1911. B.Y.P.U. (A.) *(MHC Quarterly, 1911-1912, before p. 49)*

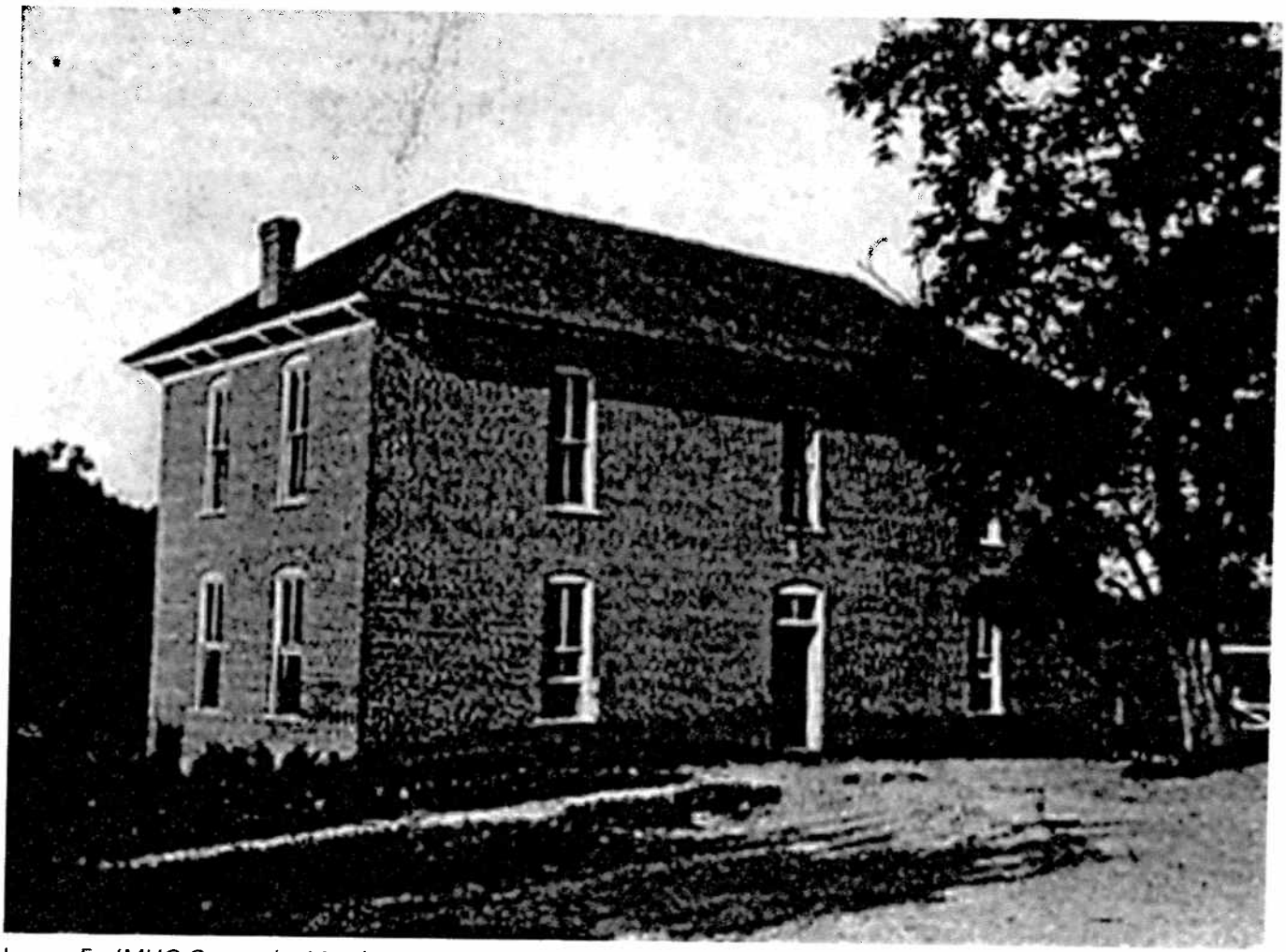

Image 5. (*MHC Quarterly, March 1912, before p. 32.*)

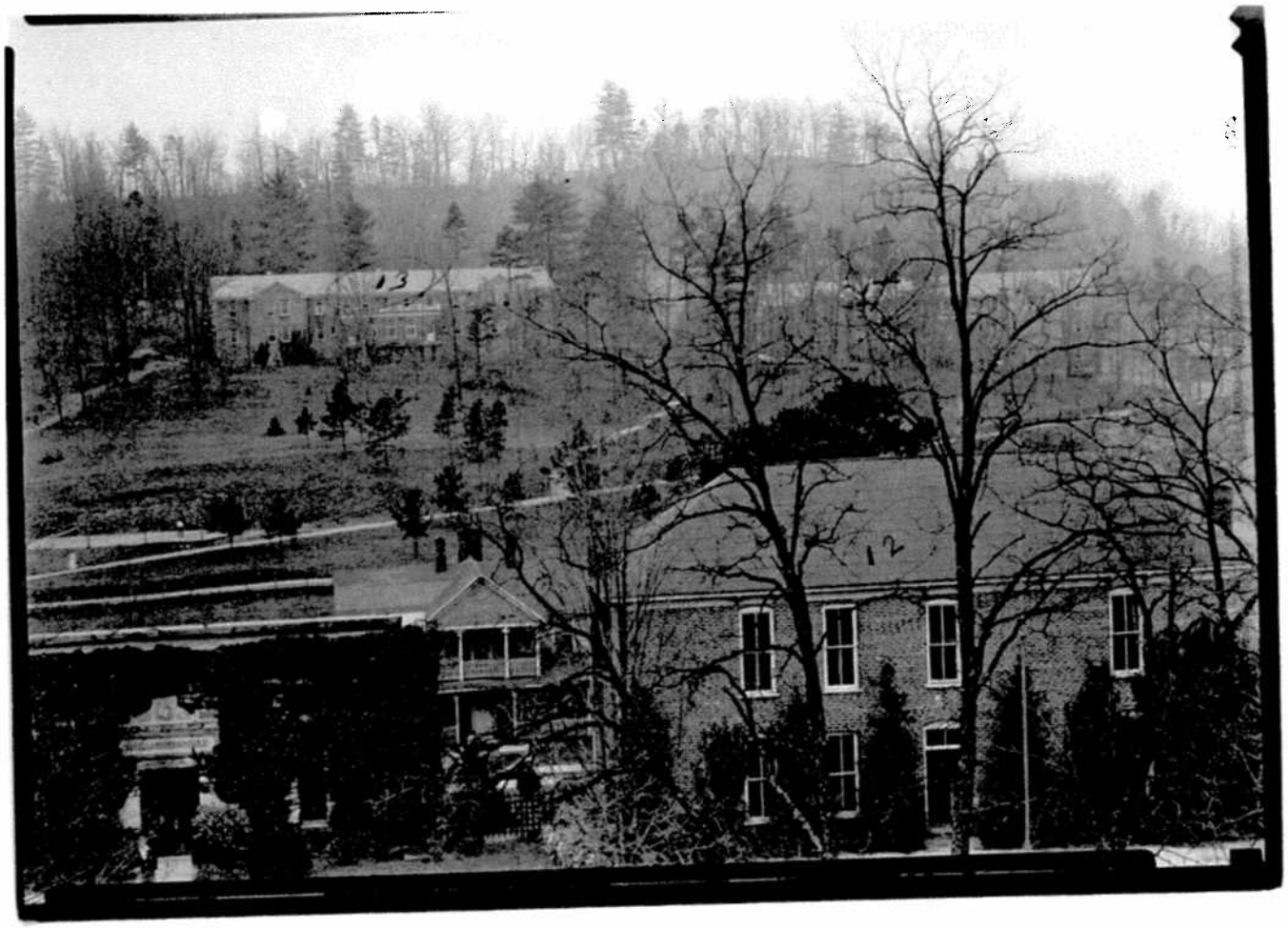

Image 6. (*MHC DN-027d*)

Image 7. Science Club, 1930. (*The Laurel, 1930,p. 84 and MHC 83-6-541*)

Image 8. Ca. 1935 looking from across the Quadrangle, with the Auditorium Building (1906-1961) on the left. (*MHC Quarterly, March 1935, before p. 17 and MHC DN-027e*)

Image 9. Ca. 1930s. South side of Founders Hall is on the left with Montague Library in the background. (*MHC 83-6-298*)

## ARCHITECTURAL DESCRIPTION

Figure 2: Music Building circa 1890 showing interior chimneys, wood shingle roof with metal caps.

Figure 3: Music Building circa 1920's showing added windows and metal roof.

Figure 4: Detail from circa 1930's photograph showing soffit brackets, metal shingle roof, and exterior chimneys.

### Exterior Walls

The building is constructed of handmade brick laid in a six-course American bond approximately one foot thick. The bricks are set in a natural sand-colored lime mortar with fragments of the original joint penciling[1] still visible in places. From the earliest documentary photographs, the building originally had internal brick chimneys at the east and west facades (*Figure 2*). Given the slender proportions of the chimneys, they were likely used to vent wood or coal stoves on both floors. These were replaced by the 1920's with exterior end chimneys of similar proportions (*Figure 4*).

### Windows and Doors

The main (north) facade originally had three bays, consisting of a central doorway with window above flanked by single windows on each side. The original windows were double-hung wood sash, two-over-two lights. The first and second-floor windows to the immediate left of the entrance as well as the second-floor window to the right of the entrance were added sometime after 1918.[2] The current brick window openings are arched with a double brick rowlock on the lower floor and a single rowlock on the upper floor, although the sashes were originally square head. From documentary photographs it is evident that the added window openings did not have an arched head when first constructed, but were reworked in recent years to match the original windows (*Figure 3*).[3] The current windows are aluminum, one-over-one light with aluminum panning covering the wood frame. Several smaller windows have been added to the side and rear façades over the years.

The front door has been replaced and sized down in width and height. The original double-leaf entrance doors were a two-panel configuration with a substantial molded sticking. The original beaded wood doorjamb survives. An odd canopy was added to protect the entrance door, but is poorly fitted to the arched opening (*Figure 6*).

### Roof

The roof is hipped with a slope of 9 in 12. The soffit projects approximately 18 inches and is finished with tongue-and-groove boards and a plain fascia. A profiled bed molding and plain frieze board finish the soffit at the brick wall. Documentary photographs show that the frieze originally had scrolled brackets paired over window openings and at the corners (*Figure 4*). These brackets appear to have been built up from three layers of wood. The current roof material is a composition fiberglass/asphalt shingle. Documentary photographs indicated that the original roof material was wood shingles with metal ridge caps (*Figure 2*). By 1918, the roof had been replaced with pressed metal shingles.

### Interior

The original plan configuration is not known since the first floor structure and the interior were completely gutted and rebuilt in 1990. The stair is in its original location and the original carriage framing survives, although treads, risers and balustrade have all been replaced. The original floor material was likely a four-to-six-inch wide tongue-and-groove heart pine, although oak or poplar could also have been used. The interior appears to have been originally finished in plaster. The ropey texture of the whitewash finished plaster wall can be viewed in the storage area below the stair.

All of the current interior finishes consist of sheetrock, modern trim and carpet. The only visible historic interior features to survive the remodeling are the stair newel post and the flooring on the second floor and the molded flooring edge at the stair opening (*Figures 7 & 15*). Some other trim may have been preserved under the modern finishes.

## ARCHITECTURAL CONDITION ASSESSMENT

### Exterior Brick Masonry

The existing handmade brick is in fair condition overall with some areas of deterioration, including spalled brick, eroded mortar and step cracking.

Figure 5: Example of spalled brick, eroded mortar joints, efflorescence in mortar joints along top of photo, improper mortar along bottom. See Photo 5.

The original mortar is a soft lime-sand mortar without portland cement. In recent years, areas of the brickwork have been repointed using a mortar with high portland cement content. This repointing mortar has a high compressive strength and tends to spall the softer brick as the materials expand and contract with changing temperatures. The low-strength handmade brick requires a mortar that is lower in compressive strength than the brick itself and therefore more flexible so that any expansion of the brick will be absorbed by the mortar. Mortar is considered sacrificial in that it is intended to be replaced or repaired on a 50-year cycle.

Areas close to grade have been most susceptible to damage due to splashback from the roof and from rising damp from the soil through the masonry *(Figure 6)*. The cement parging on the lower courses of brick has exacerbated this condition by preventing the masonry at grade from drying out and thus forcing dampness higher into the masonry wall. In several areas, the spalled brickwork exhibits efflorescence caused by soluble salts. The presence of soluble salts in the brick is a concern since these salts will absorb moisture and expand. During freeze-thaw cycles, this expansion can eventually break apart the soft brick.

Many of the step cracks around window openings have also been repaired with incompatible mortar, and have reopened in several places. Ongoing settlement of the masonry around window openings is a concern that needs to be thoroughly evaluated, including possible long-term monitoring of masonry movement.

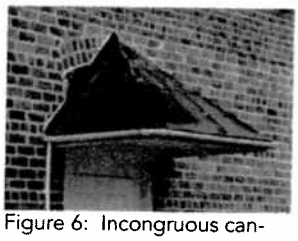

Figure 6: Incongruous canopy at entrance. Note transom hidden behind structure.

### Roof

The current roof is a composition fiberglass/asphalt shingle. The roof appears to be in good condition overall with no leaks observed.

The original roof was a wood shingle, which was replaced by 1918 with metal shingles. Although serviceable, the current composition roof is not sympathetic to the historic character of the building.

The existing ogee-style gutters have been installed too close to the top of the fascia, so that any backup in the gutter could overflow back into the soffit. The installation of gutters directly on the wood fascia has also led to deterioration of the paint due to lack of ventilation.

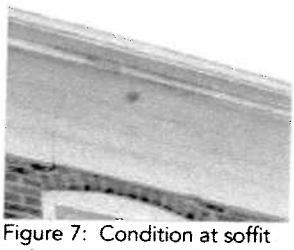

Figure 7: Condition at soffit includes bare wood, cracked and peeling paint.

The small hipped roof canopy over the entrance appears to have been added in the mid-20th century. This feature is not sympathetic to the building *(Figure 7)*.

### Exterior Woodwork

Exposed woodwork is limited to the soffit and the front door frame. All exterior woodwork and trim is currently painted white and ranges from poor to good condition.

The condition of the paint on the soffit, fascia and frieze is poor *(Figure 8)*. There are several areas of bare wood that are becoming weathered. Other areas exhibit cracking and flaking paint. On the door surround, the paint is currently in good condition. However, there is evidence of heavy build-up and cracking beneath the current paint layer which will eventually lead to failure of the paint. The window frames have been covered with aluminum panning so that the condition of these features cannot be assessed. It

Figure 8: Typical aluminum replacement window with panned trim. Sills appear to have been replaced.

can be assumed that the paint on the window frames is in poor condition.

**Windows and Doors**
All of the original and later historic windows have been replaced with commercial aluminum sash. The front entry door is also a modern replacement. The replacement windows appear to be in good condition. The front door appears to be serviceable; however the operating hardware does not meet the NC Accessibility Code.

The existing six-panel entry door replaced wider and taller two-paneled doors, requiring that the door frame be sized down. This alteration, along with the replacement of the windows detracts significantly from the historic architectural character of the building. The original transom window over the entry door appears to survive behind the small hipped roof canopy *(Figure 6)*; however this has not been confirmed.

**Interior Floor Plan**
The current floor plan appears to date from the 1990 renovations, and does not appear to retain any of the original partitions with the exception of the masonry walls that define the hallway. The plan appears to be functional with respect to the building's current use as office space.

**Flooring**
The original flooring on the main floor was replaced during structural repairs in 1990. The current flooring includes modern carpet and vinyl, which is in serviceable condition.

The original wood flooring may survive on the second floor under the current finish; however, this has not been confirmed.

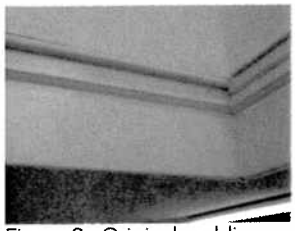

Figure 9: Original molding survives at stair opening.

**Walls and Ceilings**
The current wall finish is modern gypsum board, smooth finish, in good condition overall. The ceilings throughout are gypsum board, textured finish, also in good condition. The original wall finish was plaster, and the original ceiling finish was either plaster or tongue-and-groove wood.

**Interior Woodwork and Doors**
All current wood trim and interior doors are modern replacements and appear to be in good condition. Remnants of original trim may survive underneath furred out gypsum board; however this has not been confirmed.

**Hazardous Materials and Conditions**
The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and boiler. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical ceiling tiles, and plaster and gypsum wall board joint compound. Mold can be present wherever water damage to absorbent materials has occurred.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant. See the Introduction for additional information.

## CURRENT PHOTOGRAPHS

Photo 1. North (front) facade. Pent roof that covers the front door was added.

Photo 2. South (rear) and west facades.

Photo 3. West facade. Note ghost mark on brick for earlier chimney between the windows

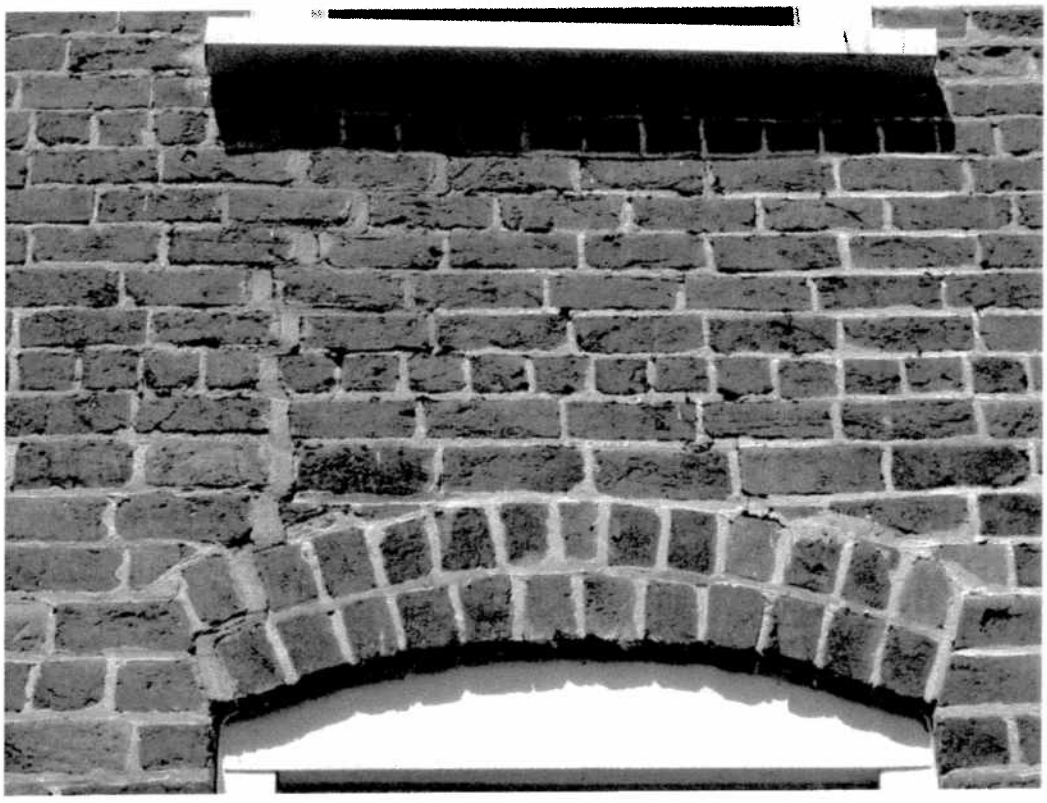

Photo 4. Detail of brick window arch showing settlement cracks.

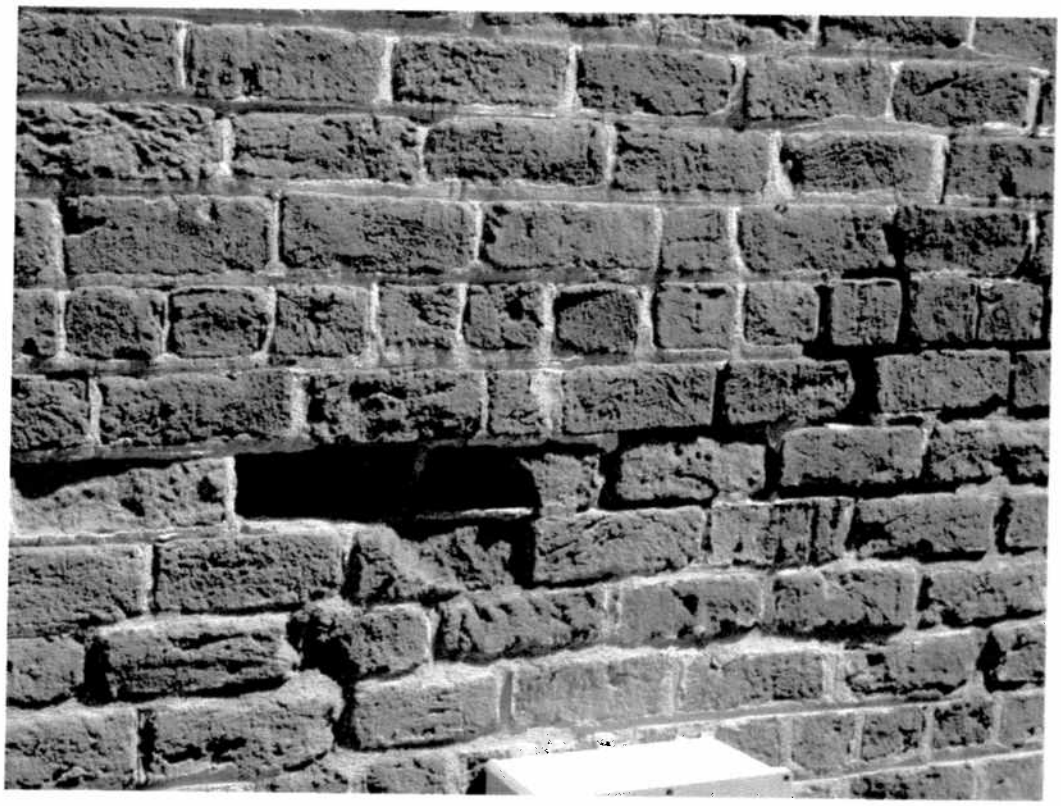

Photo 5. Example of deteriorating brick on south facade. Spalling typically caused by freeze-thaw action owing to presence of soluble salts and excessive moisture.

Photo 6. Close-up detail of deteriorated brick. Note white efflorescence cause by presence of soluble salts.

Photo 7. First floor Entry and stair.

Photo 8. First floor hallway looking east.

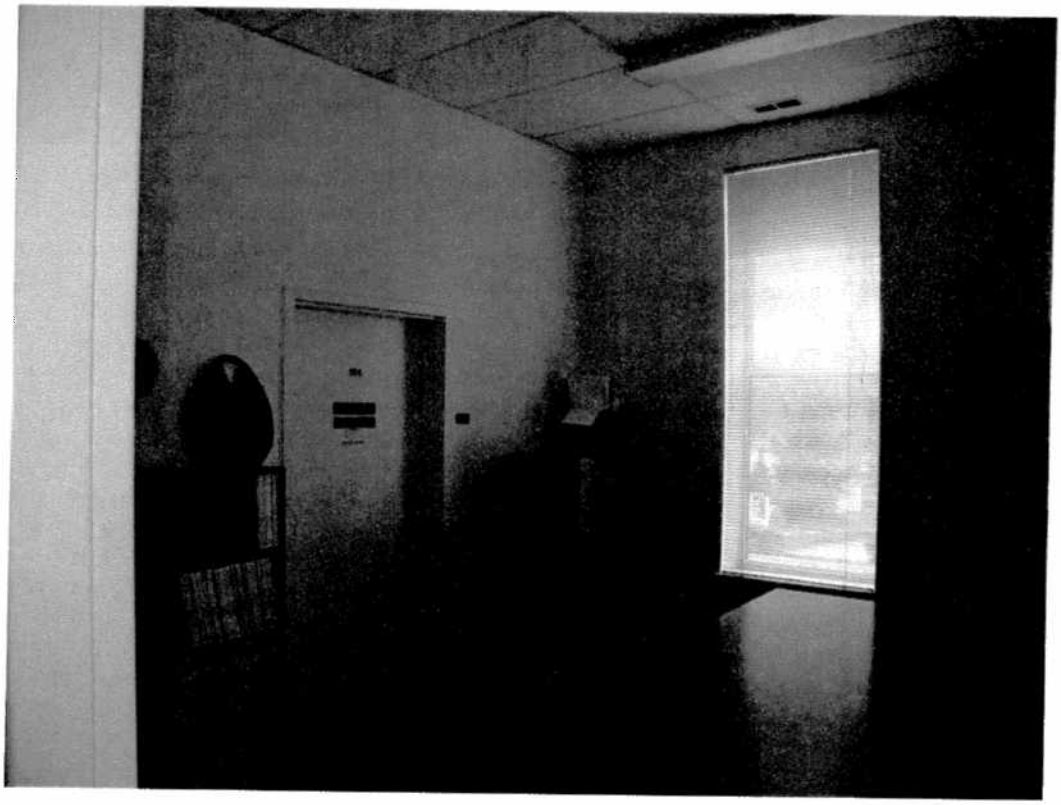

Photo 9. Typical interior room.

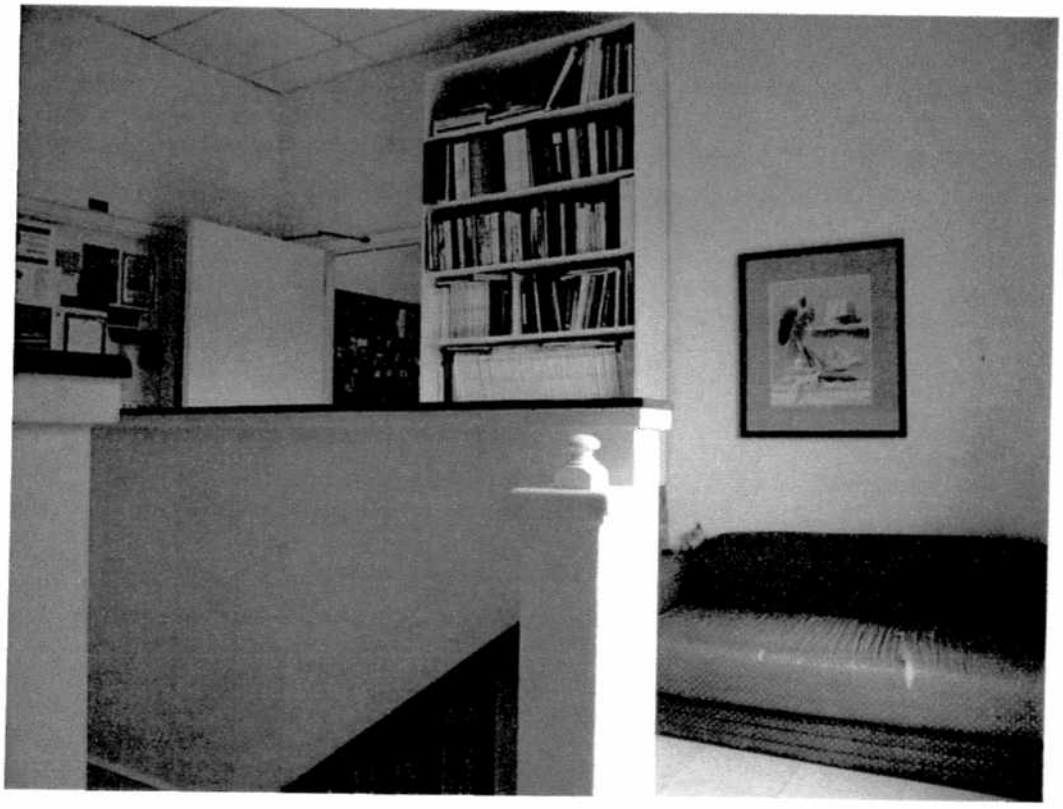

Photo 10. Second floor stair hall. Newel post finial is similar in appearance to the original turned newel post shown in Figure 16, and may have been encased or pieced.

Photo 11. Typical second floor room.

Photo 12. Attic framing at eave where chimney has been removed. Note bird nests and guano.

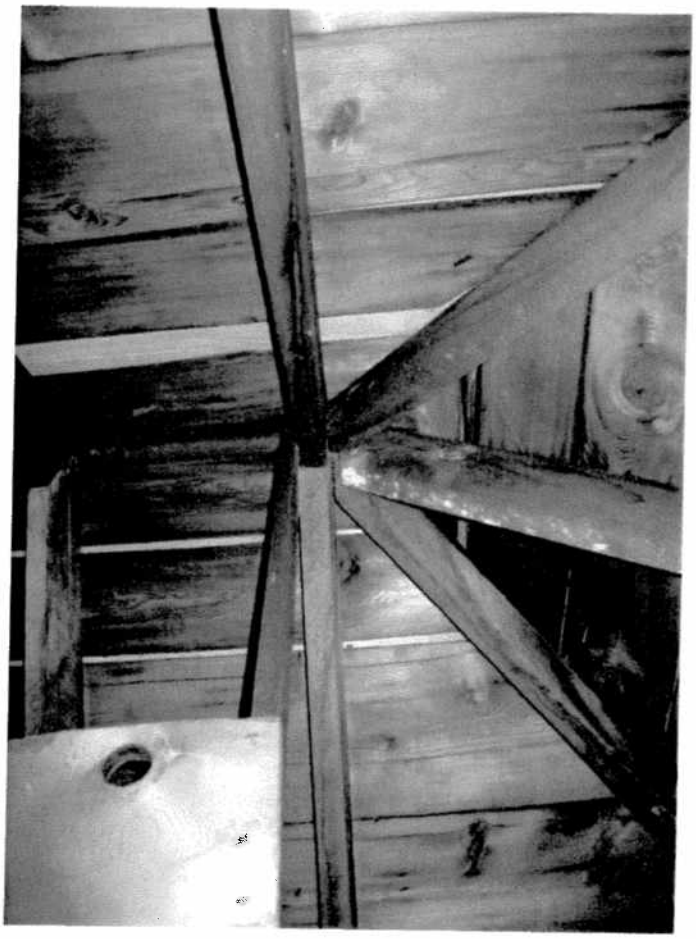

Photo 13. Roof framing at hip.

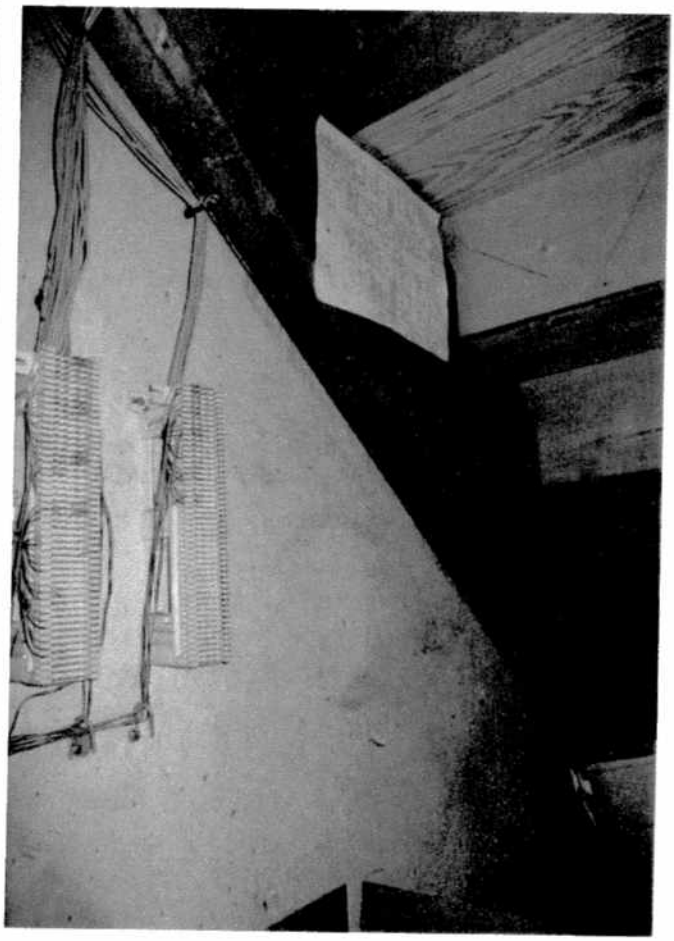

Photo 14. Area of exposed original plaster under the stair.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. There are no current plans for change of use. Overall, the building structure appears to be in good condition and does not warrant any major modifications.

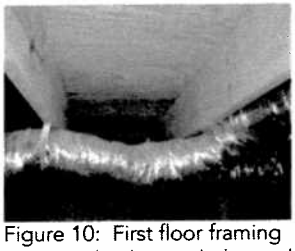

Figure 10: First floor framing with new lumber and plywood. This framing was completely replaced in 1990.

The existing structure is two stories and has undergone structural strengthening in recent years. The building is composed of a wood framed roof, wood framed floors, and exterior load-bearing brick walls. The exterior walls are of handmade brick, unreinforced, approximately one foot thick and laid in a soft sand-lime mortar, The footing below the brick foundation walls is likely another layer of brick placed perpendicular to the wall brick or a thin layer of brick mortar. A new concrete masonry stem wall along the interior of the building has been installed. The front (north) of the building appears to be a slab on grade that transitions to a crawlspace at the rear of the building. A small access hatch gains entry into the crawlspace. The floor joists and subfloor in this area were replaced in 1990 *(Figure 10)*.

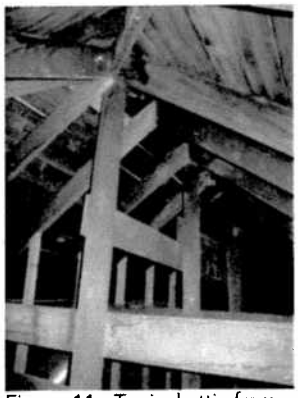

Figure 11: Typical attic framing.

The second level framing is inaccessible. However, based on the roof framing and similar structures on the campus, it is assumed the floor is framed of full dimension circular sawn lumber – most likely pine. The wood framing would typically span from perimeter brick foundation walls with joist pockets to an interior wood beam or bearing wall down the center of the building.

The roof structure is a 9-in-12 slope and is framed with full dimension 2" by 6" circular sawn pine rafters and ceiling joists, fastened with cut iron nails. There is no ridge board, and the rafters simply abut each other *(Figure 11)*. There is a 1" by 6" raising plate fastened to the top of the ceiling joists at their ends upon which the rafters bear. The framing has been structurally reinforced with modern nominal 2x4 wood members. Additional roof sheathing has also been added.

According to the consulting engineer, the repairs and strengthening of the existing structure are well constructed and the existing structural members show no signs of distress. It should be noted however, that there is a slight separation at the nailed connection of the hipped rafters at the ridge. Also, the center rafters at the end walls are discontinuous owing to the chimneys being removed. In addition, there is an overall horizontal racking of the rafter assembly with bowing toward the east. These issues should require no further evaluation, but are mentioned principally for documentation purposes.

## BUILDING SYSTEMS ASSESSMENT

### Mechanical, Electrical, and Plumbing Systems

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC. The Mechanical, Electrical, and Plumbing Systems in Founders Hall have been recently renovated. According to the consulting engineer, the building currently has MEP systems upgraded to a level comparable to what is being recommended for similar buildings on campus. No major work is anticipated.

## BUILDING CODE ASSESSMENT

The building was evaluated under the NC Rehabilitation Code. These code provisions would apply should any "Reconstruction" work or "Alteration" work that changes the existing code compliance be undertaken. Refer to the Introduction for definitions.

### Current Use

Use Group B: Faculty offices; 100 sq. ft. gross/occupant.
Total Area: 1,336 GSF per floor. Total Occupant Load: 14 per floor.

### Construction type

Type 3: Exterior walls of non-combustible masonry; interior floor and roof structures of wood construction.

### Historic Certification Provisions

Building is eligible for National Register as contributing to Mars Hill College Historic District. Listing on National Register allows for special provisions under NC Rehabilitation Code Section 1.33 – Historic Buildings.

### Conditions Assessment

The first floor currently has a single means of egress. The rear facade originally had a matching doorway, but was closed in to provide for the break room. The second floor has egress only via the stair to the first floor and from an existing fire escape. Access to the existing fire escape is through a window, then down a fixed ladder.

Located on the side facing a major street, the fire escape is highly visible. The appearance of the feature detracts from the visual integrity of the historic building. In order to consider removal of the fire escape, the egress requirements will need to be evaluated under the NC Rehabilitation Code – Basic Requirements for Use Group B (NCRC 1.17):

### Code Provisions

Figure 12: South facade with fire escape.

1. Existing fire escapes are accepted unless judged dangerous by the Building Official. Technically, the Code requires that access to any fire escape be through a door unless the occupant load is 10 or less (NCRC 1.17.a.1). The access to the existing fire escape is through a window, and the occupant load is 14.
   - The existing fire escape is <u>not</u> in compliance, but may be "grandfathered."
2. A single exit is permitted at the level of discharge (main floor) when the occupant load does not exceed 50, and exit access travel distance does not exceed 75' (NCRC 1.17.a.2). Occupant load per floor is 14, and travel distance is less than 45' for the lower floor.
   - A single exit is permitted for the main floor.
3. A single exit is permitted for 2-stories when: 1) the gross area is less than 3,000 SF/floor; 2) exit access travel distance does not exceed 75'; 3) a minimum fire resistance rating of 1-hour is provided for the exit enclosure and opening protection (stair) (NCRC 1.17.a.3). The area per floor is 1,336 SF, and the exit access travel distance is less than 65'. There is no exit enclosure or opening protection at the stair.
   - A single exit would <u>not</u> be permitted for the second floor because of the lack of exit enclosure and stair opening protection, however:
4. Stairway enclosures may be omitted in a certified historic building for that portion of the stair serving the first and second floor (NCRC 1.33.b.9).
   - The stairway enclosure required by 1.17.a.3 can be omitted because of the building's listing on the National Register.

### Conclusions and Recommendations

Removal of the existing non-conforming fire escape would be allowed on this building with its historic certification. Because of the historic significance of this building, removal of the fire escape is recommended.

## PRESERVATION RECOMMENDATIONS

Figure 13: Brickwork on north facade. Note cement stucco at grade, close proximity of plants.

### Critical Maintenance issues

1. Exterior Woodwork. Painting is required at fascia, soffit and frieze to preserve historic features.
2. Remove deteriorated paint from wood features. Lead paint removal should be done in accordance with National Institute for Occupational Safety and Health (NIOSH) standards.
   - Prime and paint exterior features.
   - Reference National Park Service Technical Preservation Brief 10.[4]
3. Brickwork. Restore brick masonry using preservation guidelines for historic masonry.
   - Repair or replace damaged bricks with reproduction or salvage bricks to match.
   - Repoint deteriorated mortar joints and incompatible cement mortar repairs with appropriate lime mortar to match existing original joint color and profile.
   - Remove cement stucco from brickwork and restore brick *(Figure 13)*.
   - Reference National Park Service Technical Preservation Briefs 1, 2 and 3 regarding historic masonry.[5]
4. Attic. Manage birds that have accessed the attic space through gaps in the soffit and fascia.
   - Make repairs to construction to prevent access by birds and possibly bats.
   - Remove guano according to NIOSH standards.
5. Landscaping. Rework landscaping to prevent damage to building.
   - Prune back foundation planting away from exterior walls to allow for adequate air circulation, inspection and maintenance.

### Priority Rehabilitation Issues

1. Roof. Install architecturally compatible roof when replacement of current asphalt roof is required.
   - Specify a pre-finished pressed metal shingle. Painted metal shingles had been installed by 1918 and would be an appropriate replacement considering the other alterations that had been made to the exterior by that date.
   - The original metal shingle was a fish-scale scalloped pattern that is no longer commercially available. Custom fabrication is a possibility; however, specification of a "Victorian shingle" as manufactured by Berridge Manufacturing Co.[6] would be an appropriate alternate.
2. Drainage. Replace current K-style gutters and downspouts with more appropriate gutter system.
   - Documentary photographs indicate that there may not have been a gutter system on the building originally. However, given the proximity of the north façade to the grade, the lack of gutters may have contributed to the deterioration of the first floor structure.
   - Existing gutters are mounted too high on the fascia, allowing rainwater overflow to back up under roof and snow or ice to dam up against roof. Gutters should be mounted so that front lip of gutter is approximately 1/2" below projecting slope of roof.
   - Specify zinc or copper half-round gutter system to include round downspouts.
   - Roof drainage system should be piped away from building into storm sewer.
3. Windows. Replace existing unsympathetic aluminum windows with historically correct windows based on photographic evidence.
   - Specify wood double-hung sash, two-over-two light. Double-insulated glazing would be an option.
   - Restore entry transom or replace to match original.
   - Remove aluminum cladding from window frame and restore wood or replace

Figure 14: Detail of rear (south) elevation showing paneled double doors.

to match original.

4. Doors. Replace existing incompatible 6-panel door with historically correct two-panel door based on photographic evidence.
   - The NC Building Code will not permit accurate replacement of the double doors because of egress width and accessibility requirements, therefore:
   - Specify a custom, single-leaf, stile-and-rail door, width and height to match the original (approximately 4' wide by 7'-2" tall), with four panels proportioned to match the original configuration *(Figure 15)*.
   - Restore original beaded edge wood door frame.
   - Hardware should be appropriate to the style and age of the building, and must meet all NC Accessibility Code requirements.
5. Alterations. Remove unsympathetic exterior alterations.
   - Remove hipped entrance canopy and restore doorway.
   - Remove fire escape and construct historically appropriate landing and stair if second means of egress is required. Refer to Code Assessment.

Figure 15: Detail of ca. 1918 photo showing newel post.

**Optional Rehabilitation Issues**

1. Exterior Masonry. Remove arched window heads at non-original windows and restore to square head configuration as originally installed.
2. Center Hall. Restore the architectural character of the center hall to a historically appropriate finish.
   - Replace modern trim with historically appropriate baseboard and door casing based on surviving examples in place.
   - Install low-profile laminated wood flooring.
     - Use transition thresholds to existing flooring at doorways.
     - Specify nominal 6" width on boards.
   - Replace existing surface mounted fluorescent lighting with historically appropriate light fixtures.
3. Stair. Preserve the original location of stair and restore architectural character.
   - Reconstruct turned newel post at bottom of stair based on photographic evidence *(Figure 15)*.
   - Reconstruct balustrade based on age and style of building.
   - Preserve or restore altered newel post on second floor.
   - Reconstruct balustrade around stair opening based on age and style of building.

## COST ESTIMATE

Based upon current market information, a statement of probable cost follows. Unit price figures are obtained from R. S. Means, 1st quarter 2006. These costs do not include asbestos abatement or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead &Profit |
|---|---|---|---|---|---|
| **01 General Conditions** | Construction facilities, temporary equipment, administration, regulatory requirements | | | 10% | $5,182.00 |
| **02 Existing Conditions** | Demolition of existing steel fire escape | 1.0 | Flight | 700.00 | $700.00 |
| | Demolition of wood roof framing - 2x6's @ 24" o.c., 1" sheathing, asphalt roofing | 30.0 | S.F. | 2.70 | $81.00 |
| | Demolition of existing interior frame stairs | 18.0 | Riser | 8.15 | $146.70 |
| | Lead paint removal at cornice and soffit | 340.0 | S.F. | 5.45 | $1,853.00 |
| | Lead paint removal/prep exterior wood doors | 420.0 | S.F. | 5.20 | $2,184.00 |
| **04 Masonry** | Masonry - point existing | 323.0 | S.F. | 19.20 | $6,201.60 |
| | Masonry - replaced damaged brick | 28.0 | Ea. | 30.00 | $840.00 |
| | Masonry - clean existing | 3,230.0 | S.F. | 1.10 | $3,553.00 |
| **06 Wood** | Wood roof framing repair/replace roof rafters & sheathing | 34.0 | S.F. | 10.55 | $358.70 |
| | Wood stair - 3' wide, 1-story, oak treads, risers, newel posts, balustrade one side | 1.0 | Ea. | 2,992.00 | $2,992.00 |
| **07 Thermal & Moisture** | Roof - ice dam membrane at all valleys, ridges and eaves | 680.0 | S.F. | 1.10 | $748.00 |
| | Roof - steel shingles, Kynar finish | 2,200.0 | S.F. | 3.85 | $8,470.00 |
| | Ridge Vents, flexible roll, excl. shingles | 170.0 | L.F. | 3.70 | $629.00 |
| | Copper downspouts, round, stock, 16 ounce, 4" dia | 72.0 | L.F. | 8.00 | $576.00 |
| | Copper gutters, half round, 16 ounce, stock units, 5" wide | 182.0 | L.F. | 5.80 | $1,055.60 |
| **08 Openings** | Doors - new custom exterior wood door | 1.5 | Ea. | 1,440.00 | $2,160.00 |
| | Doors - install bronze weatherstripping at exterior doors | 1.5 | Ea. | 63.00 | $94.50 |
| | Doors - new door hardware to meet ADA | 1.0 | Ea. | 138.80 | $138.80 |
| | Windows - new wood sash, 2/2 light, insul. glazing | 486.0 | S.F. | 21.50 | $10,449.00 |
| | Windows - storm windows, interior magnetic | 486.0 | S.F. | 6.40 | $3,110.40 |
| **09 Finishes** | Exterior painting – soffit, primer + 2 coats | 1,020.0 | S.F. | 1.90 | $1,938.00 |
| | Exterior painting – trim, primer + 2 coats | 420.0 | S.F. | 0.71 | $298.20 |
| | Exterior painting - doors | 2.0 | Ea. | 52.25 | $104.50 |
| | Exterior painting - multi-light windows | 486.00 | S.F. | 3.70 | $1,798.00 |
| | Interior painting - ceilings | 100.0 | S.F. | 0.65 | $65.00 |
| | Interior painting - walls | 440.0 | S.F. | 0.55 | $242.00 |
| | Floating Floors, wood composition strip, complete | 100.0 | S.F. | 6.00 | $600.00 |
| **31 Earthwork** | Grading by hand, light soil, less than 6' deep | 13.0 | C.Y. | 33.00 | $429.00 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | | | **$56,998.00** |
| | Architectural & Engineering Fees | | | 9% | $ 5,130.00 |
| | Contingency | | | 20% | $12,425.00 |
| **TOTAL ESTIMATED COST** | | 2,672.0 | S.F. | $27.90 | **$74,553.00** |

## Notes

[1] "Penciling" refers to the decorative white line drawn on the mortar joint. Made with lime slurry, the primary purpose of this line was to give a more regular appearance to the hand-made brickwork. This thin coating of lime also served to protect the mortar joint from weathering.

[2] Documentary photograph #DN-027d shows the Music Building without these windows. Montague Library, erected in 1918 is shown in the photo covered in ivy.

[3] All of these later windows have their arched heads laid completely with a modern cement mortar, suggesting recent alterations. Other arched window heads typically have partial joint repairs.

[4] NPS Preservation Brief #10: Exterior Paint Problems on Historic Woodwork, available at www.cr.nps.gov/hps/tps/briefs/brief10.htm.

[5] NPS Preservation Brief #1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings, available at www.cr.nps.gov/hps/tps/briefs/brief01.htm.
NPS Preservation Brief #2: Repointing Mortar Joints in Historic Masonry Buildings, available at www.cr.nps.gov/hps/tps/briefs/brief02.htm.
NPS Preservation Brief #3: Dangers of Abrasive Cleaning to Historic Buildings, available at www.cr.nps.gov/hps/tps/briefs/brief06.htm.

[6] Berridge Manufacturing Company, 1720 Maury St., Houston, TX 77026, 800-231-8127, www.berridge.com/classvic.htm.

EXISTING
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

N

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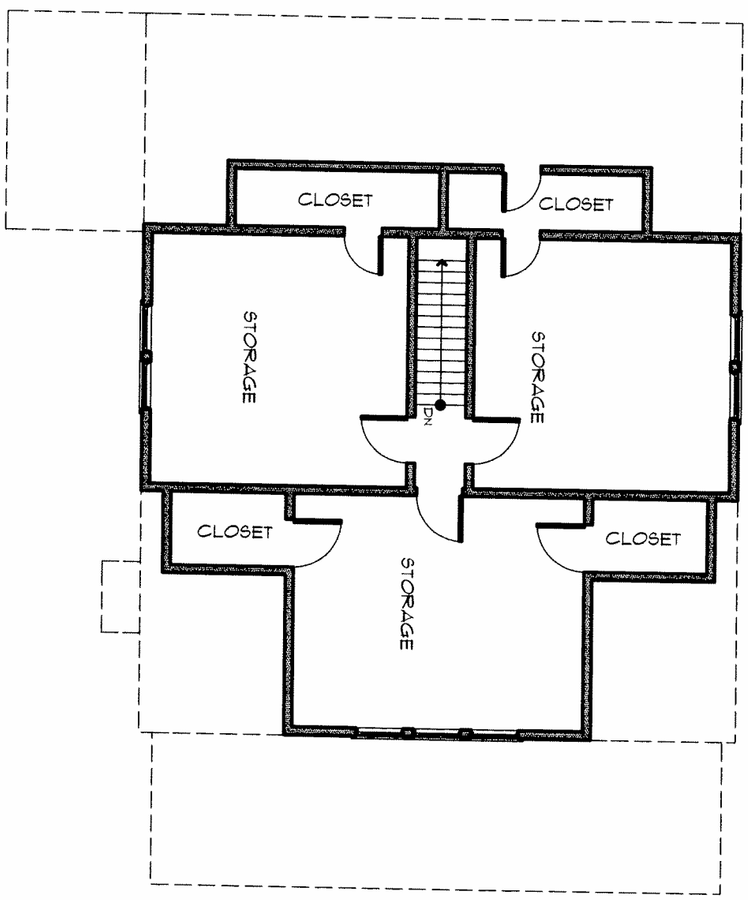
# JARRETT HOUSE

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
FIRST FLOOR
PLAN




# EXISTING SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

N

# JARRETT HOUSE

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING SECOND FLOOR PLAN

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# JARRETT HOUSE

## PRESERVATION PLAN

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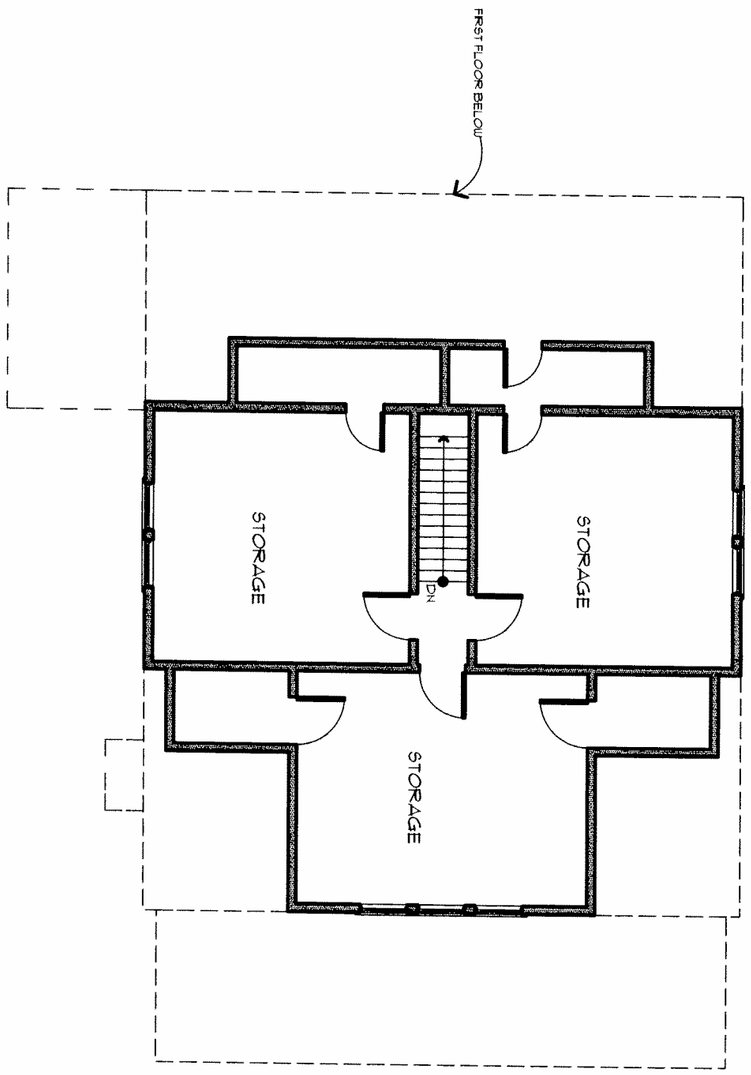
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
FIRST FLOOR
PLAN




# PROPOSED SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

N

# JARRETT HOUSE

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED SECOND FLOOR PLAN

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# JARRETT HOUSE

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

(Mars Hill College 83-828)


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PROPOSED PLANS

# JARRETT HOUSE

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

## GENERAL INFORMATION

**Year Built** — After 1920 (see historic images); acquired by Mars Hill College in 1953

**Style** — Craftsman Bungalow

**Architect** — M. E. Parmalee, Knoxville, Tennessee
*(Parmalee has been traditionally considered the architect for the Jarrett House and built the same year as the Mars Hill Baptist Church in 1918. Photographic evidence contradicts this date and indicates that it was constructed after1920 and before 1927. The common bungalow design of the building indicates that it may have been built after a pattern book or could have been a "kit" house, common during that time period, rather than having been designed by an architect.)*

**Builder** — Unknown

**Original use** — Pastorium (parsonage) for adjacent Mars Hill Baptist Church (now Owen Theatre)

**Current uses** — Unoccupied; assigned to the Theater Department; formerly security offices

**Proposed use** — Undetermined; Theater Department

**Building area**

| | | |
|---|---|---|
| Basement: | 1,053 SF | (unfinished) |
| First Floor: | 854 SF | |
| Second Floor: | 582 SF | |
| Total | 1,436 SF | (net SF, finished) |

## HISTORIC SIGNIFICANCE

This house was built as a residence for the neighboring church's pastor. It is the only arts and crafts bungalow on the college campus today and is a good example of the style, which was prevalent in the early twentieth century.

## HISTORIC CERTIFICATION

Contributing building, proposed Mars Hill College Historic District, National Register of Historic Places.

## ARCHITECTURAL SIGNIFICANCE

The house in mostly intact to its original construction, with a few changes to finishes on the interior. It is a typical one and one-half story bungalow with a gable-roofed dormer facing the front.

**Exterior**

- Building massing and form
- Brick and wood shingle siding
- Wood doors and windows
-

**Interior**

- Plaster walls
- Wood floors
- Simple wood trim
- Fireplace in Living Room

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when source information was available. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available. Some have been cropped to fit the format of the report, but important information has not been lost.

The first two historic images are of the Mars Hill Baptist Church, now Owen Theatre, including the site to the east (right) of the church. These photos are included to show that another house originally sat on the same site until at least 1920. This evidence dates Jarrett House as having been constructed sometime after 1920, rather than in 1918 as previously thought.

Image 1. 1918, "New Church." View of the Mars Hill Baptist Church soon after completion. *(Mars Hill College Quarterly, June 1918, after p. 12.)*

Image 2. 1920,"'E" B.Y.B.U.'"group on the steps of Mars Hill Baptist Church. *(The Laurel, 1920, p. 55)*

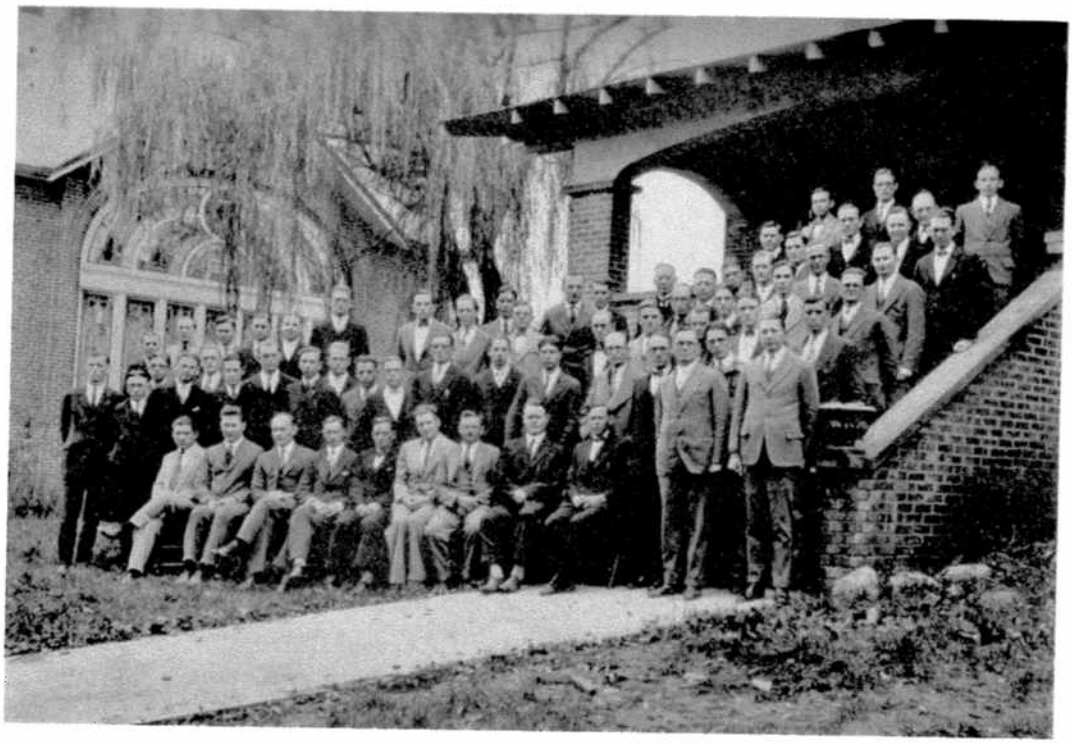

Image 3. 1927, "Group of Ministers." The front end of the brick wall at the stair is showing that it is in need of repair, the mortar has deteriorated. *(Mars Hill Quarterly, April 1927, after p. 8.)*

Image 4. 1920s (?) Group photo. A family is on the porch. The house has dark shingles and window sash with white trim, very much like the existing colors. The house on the right has been demolished. *(MHC 83-828)*

## ARCHITECTURAL DESCRIPTION

The one and one-half story house is a typical early twentieth century bungalow constructed with the same brick as Owen Theatre. It has a side gable roof with a shed roof extension over the wide front porch, which is supported by square brick columns. A gabled dormer projects from the upper floor over the porch with three 6/1 double-hung wood windows.

The front door is centered on the symmetrical main facade with three 6/1 wood double-hung windows on either side. Side walls are punctuated with additional wood windows on both floors and there is a small porch at the northwest corner that has been enclosed.

There is a living room, dining room, kitchen, bath, and two bedrooms on the first floor with a stair in the center of the house to the second floor, which has three bedrooms. The basement is accessible from a stair off of the kitchen and from an exterior door on the west side under the front porch. A room under the porch has been finished, while the remainder of the basement is unfinished. A small, enclosed porch is on the northeast corner and appears to be original.

## ARCHITECTURAL CONDITION ASSESSMENT

The house is generally in sound condition, although it suffers from general deterioration, deferred maintenance, and a few unsympathetic alterations. General repairs and painting are needed on both the exterior and interior.

The exterior brickwork needs spot repair and repointing, particularly on the side walls of the front stair. Wood surfaces need to be cleaned, prepared, and repainted which includes trim, windows, doors, and shingles.

The interior also needs general repairs to plaster, wood surfaces, wood floors and new finished through-out. The building has seen some hard use as offices for campus security and other uses. Few changes have been made to the floor plan, with the exception of the introduction of toilet facilities into the northeast bedroom.

The second floor is reached by a very narrow and steep single-run stair. Ceiling heights are also low and while these rooms are probably acceptable as part of a private residence, occupying these spaces under the commercial code will be difficult.

The basement originally had a finished room in the front under the porch, but it has been used for storage and is not in good condition. The remainder of the basement is utilitarian for storage and laundry facilities.

Structural and building systems assessments were not included in the scope of work for this building.

### Hazardous Materials and Conditions

The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and other mechanical equipment. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical tile ceiling tiles, plaster and gypsum wall board joint compound. Mold can be present wherever water damage or high humidity is present. The basement is an obvious problem area, as it smells very musty and is full of costumes and furniture that tend to hold moisture.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant. See the Introduction for additional information.

## CURRENT PHOTOGRAPHS

Photo 1. South view of main facade.

Photo 2. Southeast view, with Owen Theatre in the background.

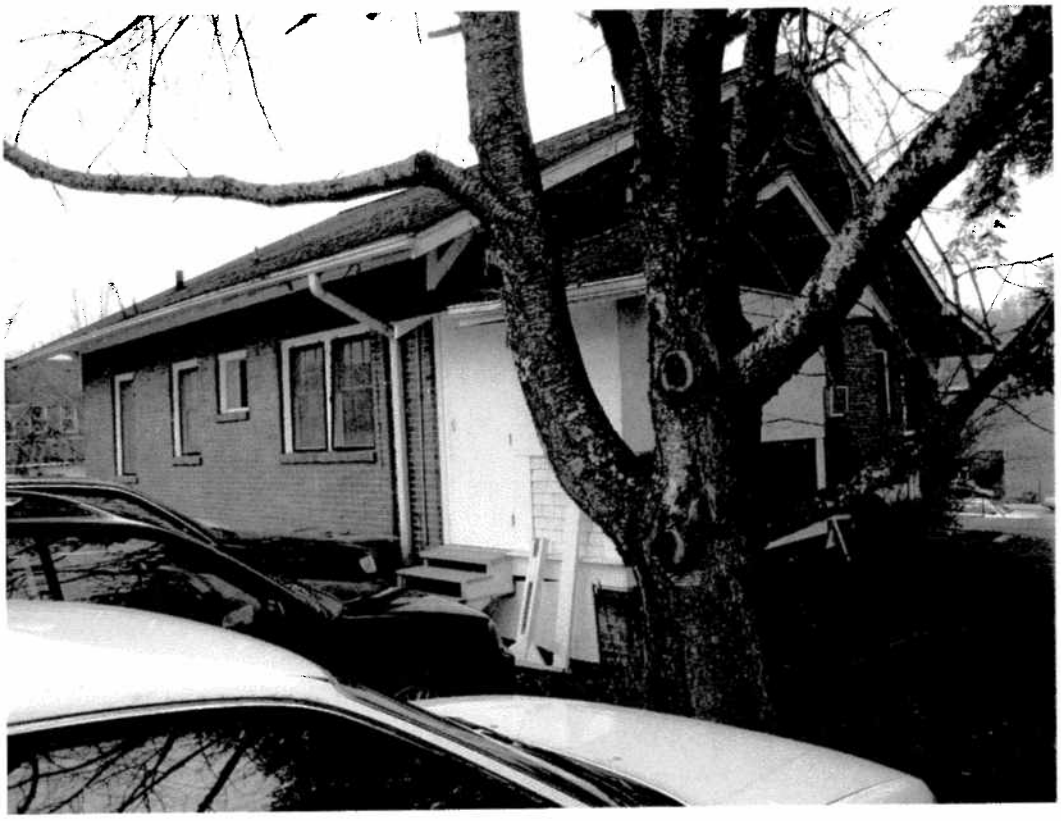

Photo 3. Rear view of northwest corner. Portion with white exterior is a porch that has been enclosed.

Photo 4. Entrance into basement at southwest corner.

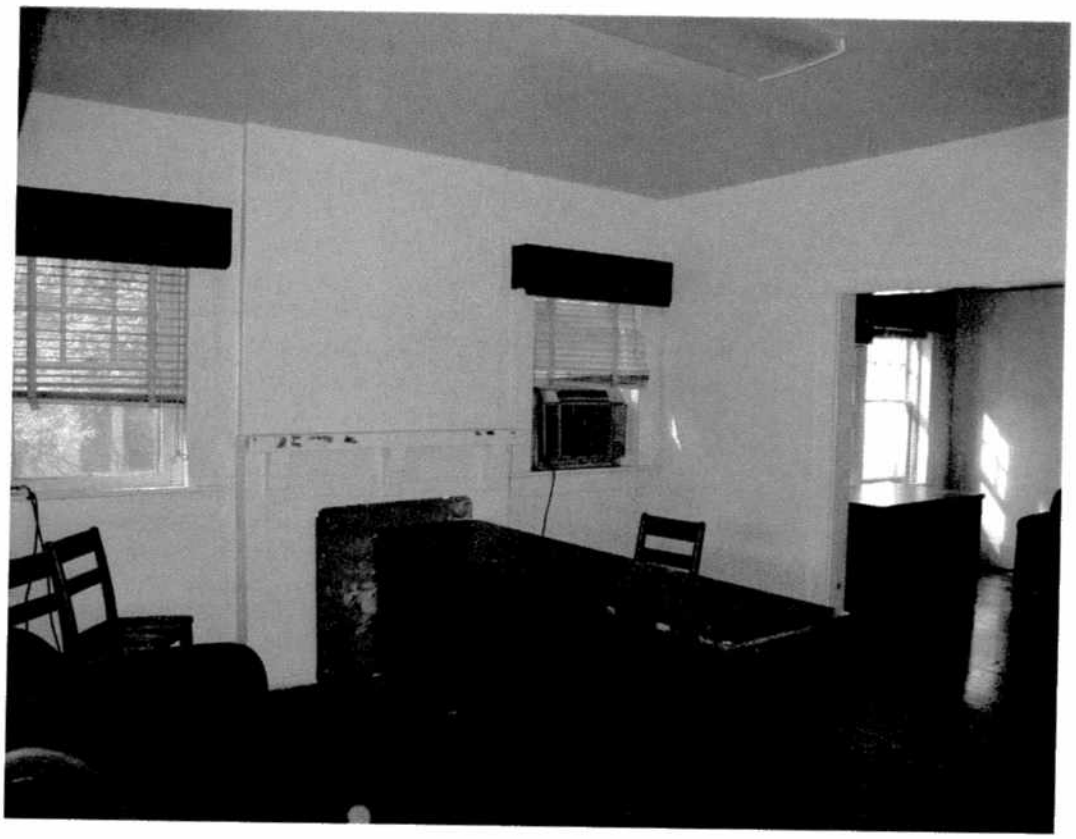

Photo 5. Interior of former living room with original fireplace.

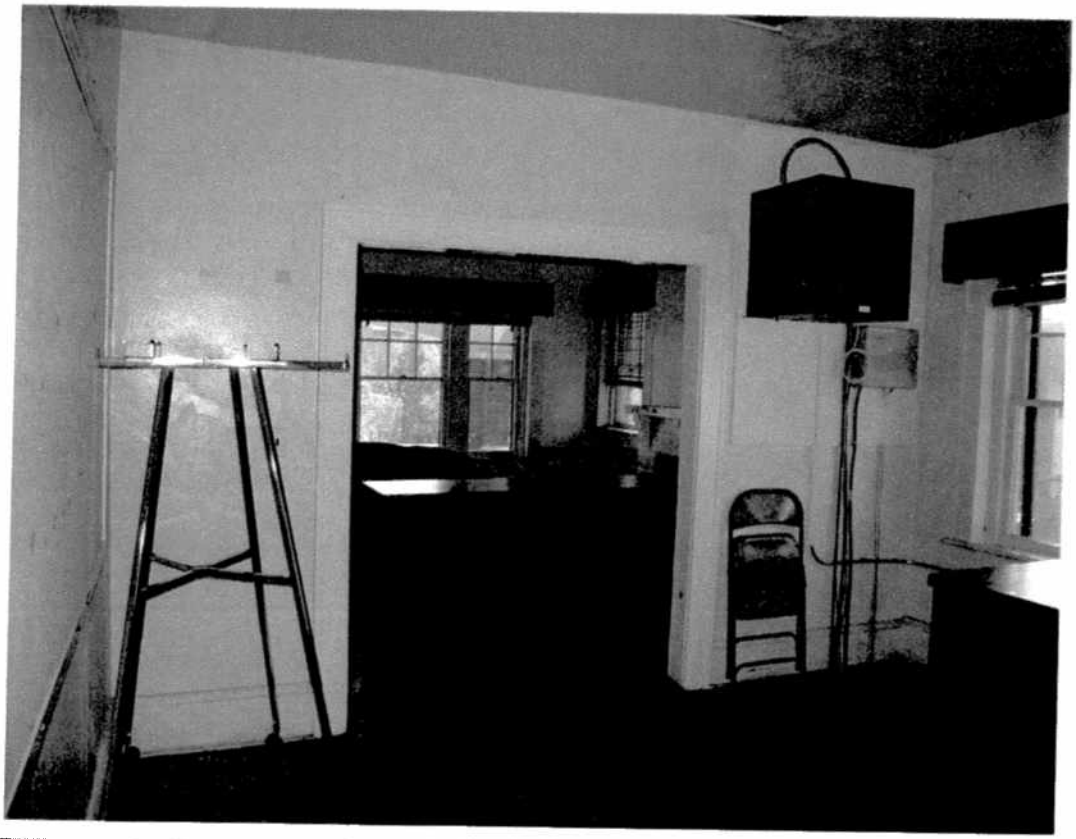

Photo 6. Interior of former dining room looking south into the living room. The large box mounted on the wall is communication equipment remaining from use as offices for campus security.

Photo 7. Interior of kitchen. Cabinets probably date from the 1950s or 60s.

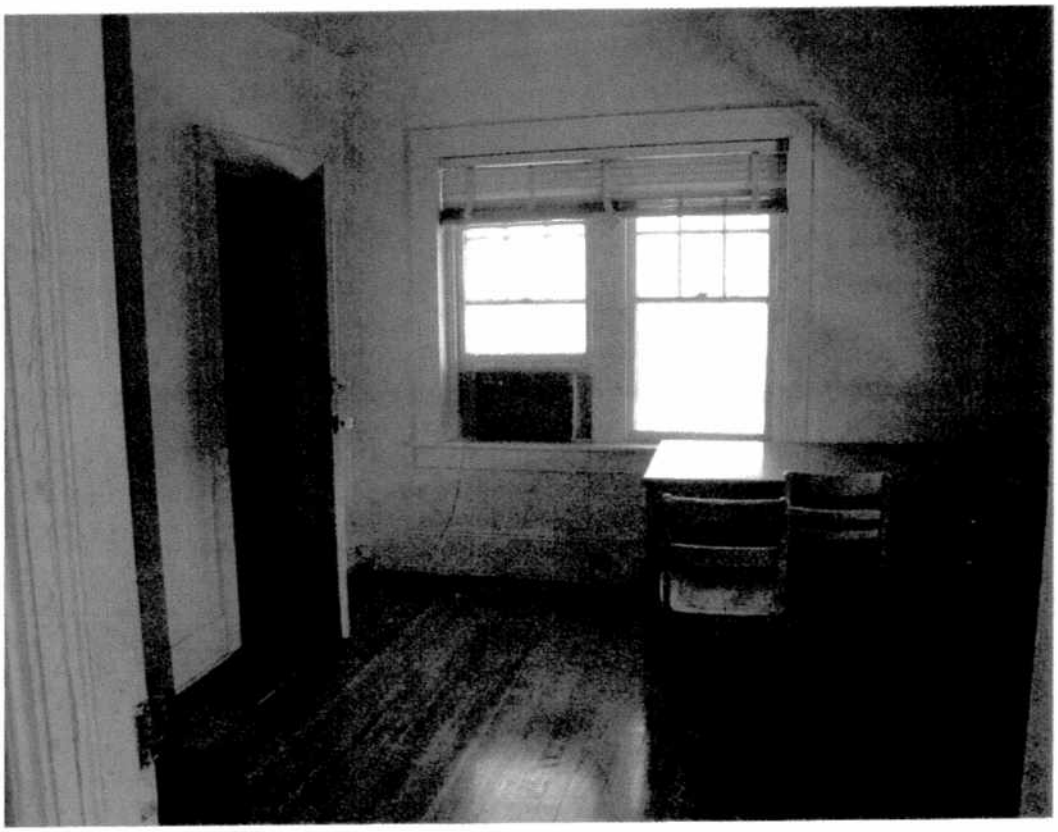

Photo 8. Interior of front, first floor bedroom.

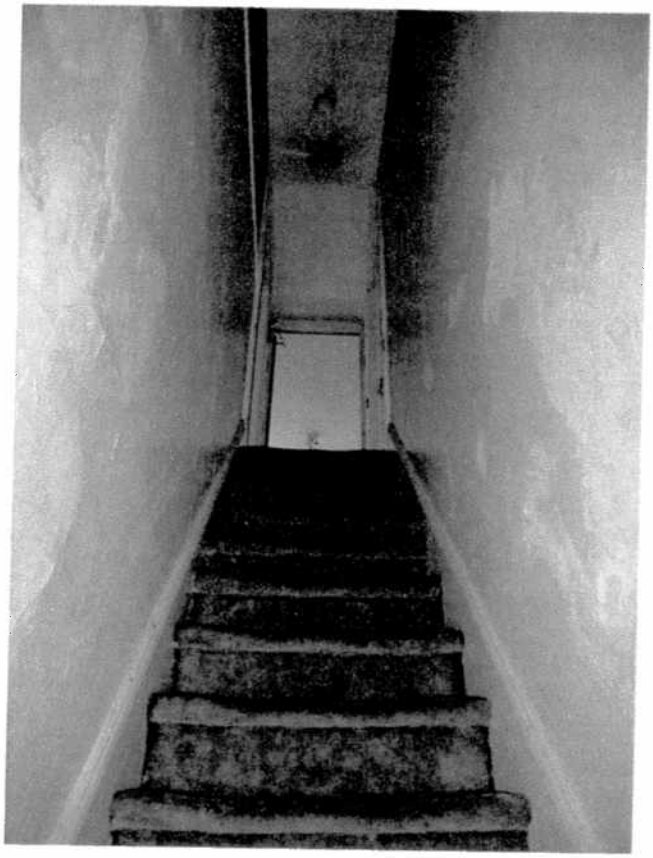

Photo 9. Stair up to second floor. The stair is very steep and does not have any handrails. The carpet and plaster is also in poor condition.

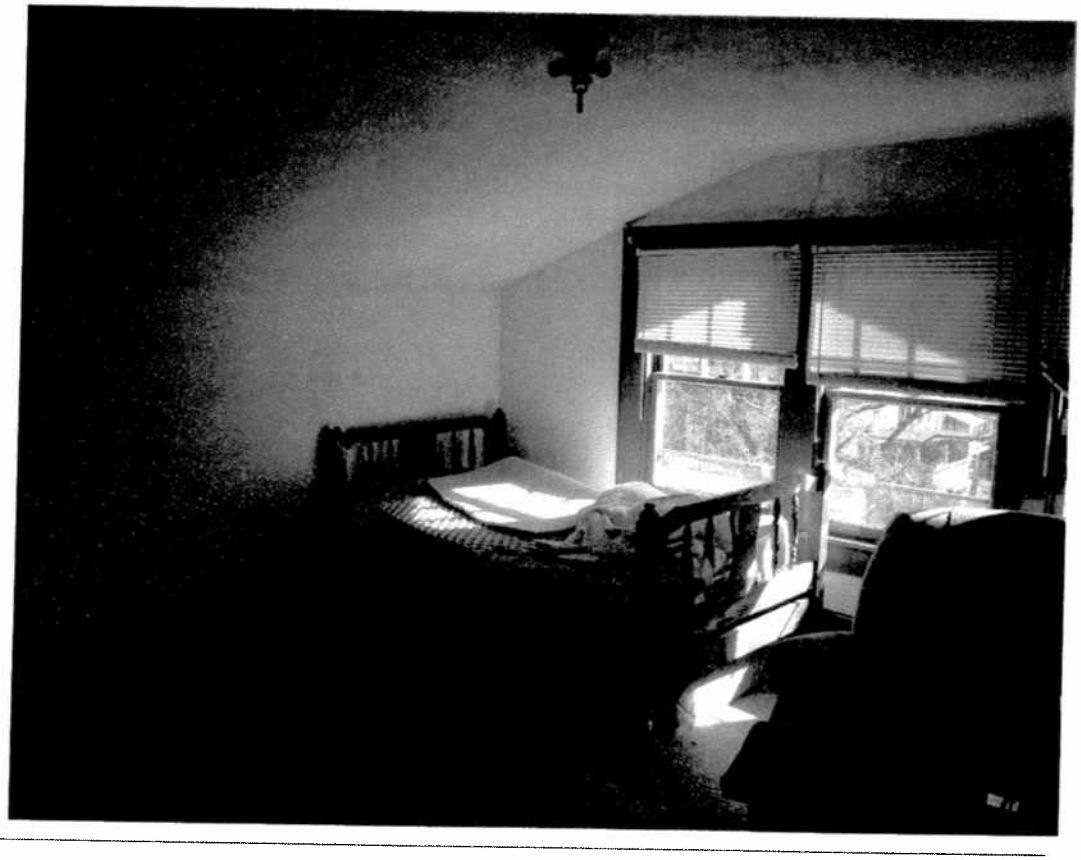

Photo 10. Front, upstairs bedroom.

**BUILDING CODE ASSESSMENT**

Use of the house as offices meets the general code requirements of all of the code options due to its size. All of the building codes allow business occupancy of fewer than 50 people in a wood framed building.

For the purpose of this study, however, the building was evaluated under the 2006 North Carolina Rehabilitation Code, assuming that the building would undergo a full rehabilitation project, defined as a "reconstruction" project under this code.

The main deficiencies of the building are an inaccessible front entrance and restrooms, the stair to the second floor, and potential structural loading capacities.

Although accessibility requirements call for disabled access to the main entrance (front door), it is far easier to provide access to the rear porch and through the kitchen. As this is adjacent to the parking area, it assumed that this option will be acceptable.

**Current and Proposed Uses**

Use Group B – Business (Offices and Education over grade 12)

**Construction Type**

Type: Exterior walls of non-combustible masonry; interior floor and roof structures of combustible (wood) construction.

**Historic Certification Provisions**

Building is eligible for National Register Listing as contributing to the Mars Hill Historic District. Listing on the National Register allows for special provisions under NC Rehabilitation Code Section 1.33 – Historic Buildings.

**Code Provisions**

The following assessment of requirements refers to the NC Rehabilitation Code Section 1.17 (Use Group B and 1.33 (Historic Buildings). This list includes the primary requirements; the code should be reviewed for additional items.

1. Exits: Single exit permitted as the building not more than two stories high and an occupant load less than 50. (§1.17a3) Building complies, two exits are present.
2. Capacity of Means of Egress: Present stair does not meet code as it is too narrow and steep. Occupancy of the second floor may not be permitted for business occupancy. Storage occupancy may be acceptable, although floor loading capacities should be determined. (§1.17c)
3. Means of Egress Lighting: Artificial lighting with intensity not less than one foot candle at the floor with emergency back-up. (§1.17e)
4. Illuminated Exit Signs: Required with emergency backup. (§1.17f)
   - Plumbing requirements per floor. (§1.17k) Refers to NC Plumbing Code, table 403.1 (revised July 1, 2006). One unisex accessible facility is required with a water closet and a lavatory if the occupancy is under 15 people.
5. Interior finishes shall comply with requirements of §1.11c for flame spread. (§1.17m)
6. Manual Fire Alarm: Required if the entire building is rehabilitated. (§1.17Aa)

## PRESERVATION RECOMMENDATIONS

Alterations have been proposed by others that would reuse the house as support space for Owen Theatre. This would include removing the interior structure of the house for use as a black-box theater and a large addition for restrooms and a box office. This concept involves major alterations that would have a significant negative impact on its historic character. The recommendations proposed in this study propose a different approach that is much more sympathetic to the house.

These recommendations propose using the house as a support space for Owen Theatre as office space. The residential character of the building, small size of the rooms, location of the stair, and low headroom on the second floor limit the reuse of the space, but it can be adapted to office use.

The proposed plan includes a ramp on the rear for disabled access, six offices, and a unisex toilet room on the first floor. Both the basement and the second floor would be used for storage. Please note that the second floor needs to be studied to ensure that it is structurally capable to meet code for storage.

## PROPOSED SCOPE OF WORK

**Demolition/Removal**
- Existing Restrooms

**Site**
- Provide accessible parking spaces
- Install new accessible ramp to meet code at the rear

**Exterior**
- Clean, repair, and repoint deteriorated brick
- Restore wood windows, prep, and paint
- Install operational interior or exterior storm windows
- Restore wood doors
- Repair wood trim and eaves, prep and paint
- Replace gutters, downspouts, and underground drains to daylight or storm sewer

**Interior**
- Repair plaster walls and ceilings, prep, and paint
- Repair wood trim, windows, doors, and transoms, prep and paint
- Repair, prep and paint wood stair
- Replace and/or refinish floors

**Building Systems**
- HVAC – complete new systems
- Electrical – upgrades as needed including wiring, fixtures, and communications
- Plumbing – new system with new toilet room
- Fire Protection – fire alarm and smoke detectors

## COST ESTIMATE

The preliminary cost statement for this building is based upon the work being performed as a bid project by a general contractor. The estimate also assumes a great deal of interior work and finish repairs and other work as outlined above. The estimated cost is $75,000. It may be possible to reduce this figure by refining the scope of work and/or having the work completed by college personnel.

EXISTING
BASEMENT PLAN
SCALE: 1/8" = 1'-0"

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# MARSHBANKS HALL
## PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
BASEMENT
PLAN

EXISTING
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

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## PRESERVATION PLAN
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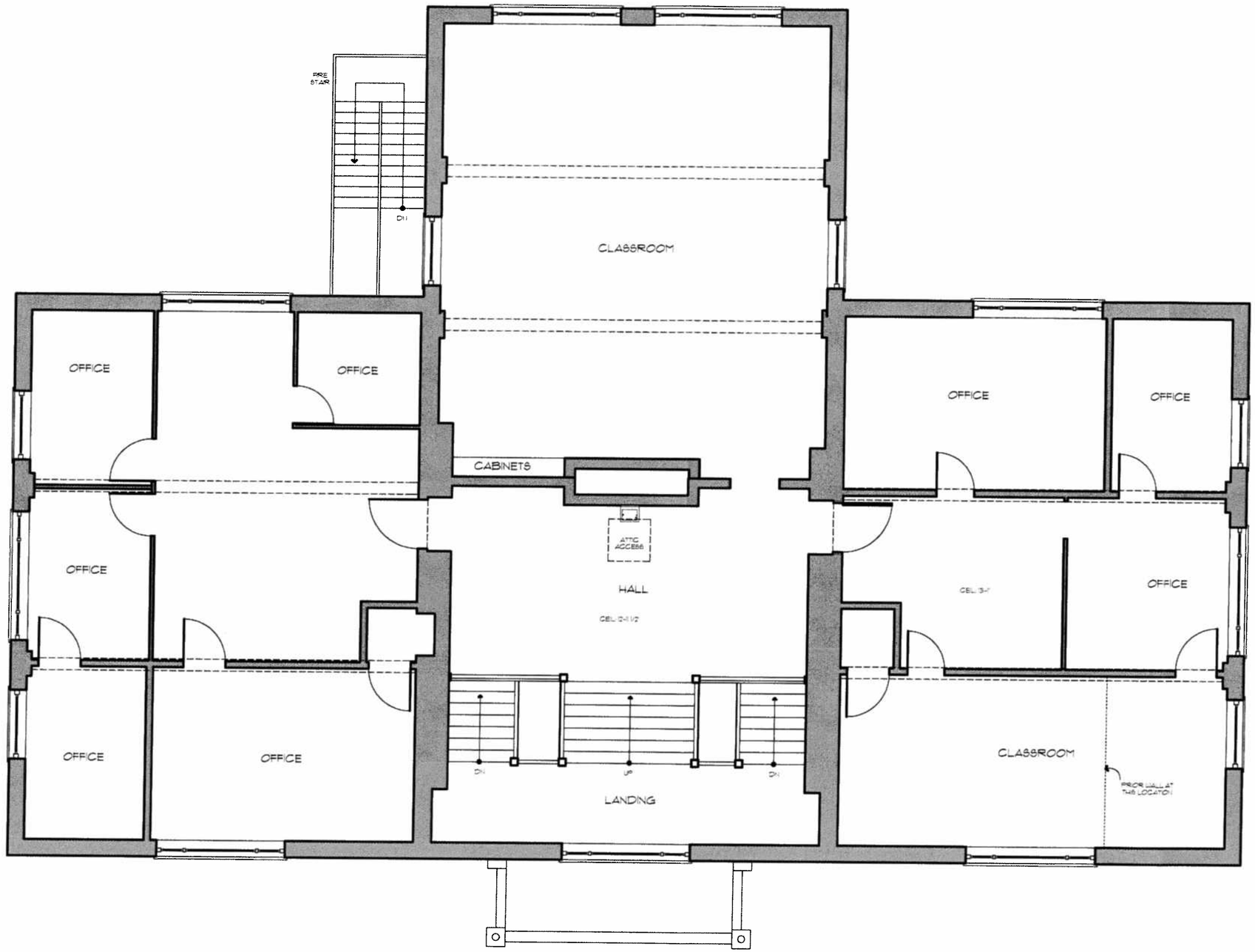
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
MAIN
FLOOR
PLAN

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## PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING SECOND FLOOR PLAN

# PROPOSED BASEMENT PLAN

SCALE: 1/8" = 1'-0"

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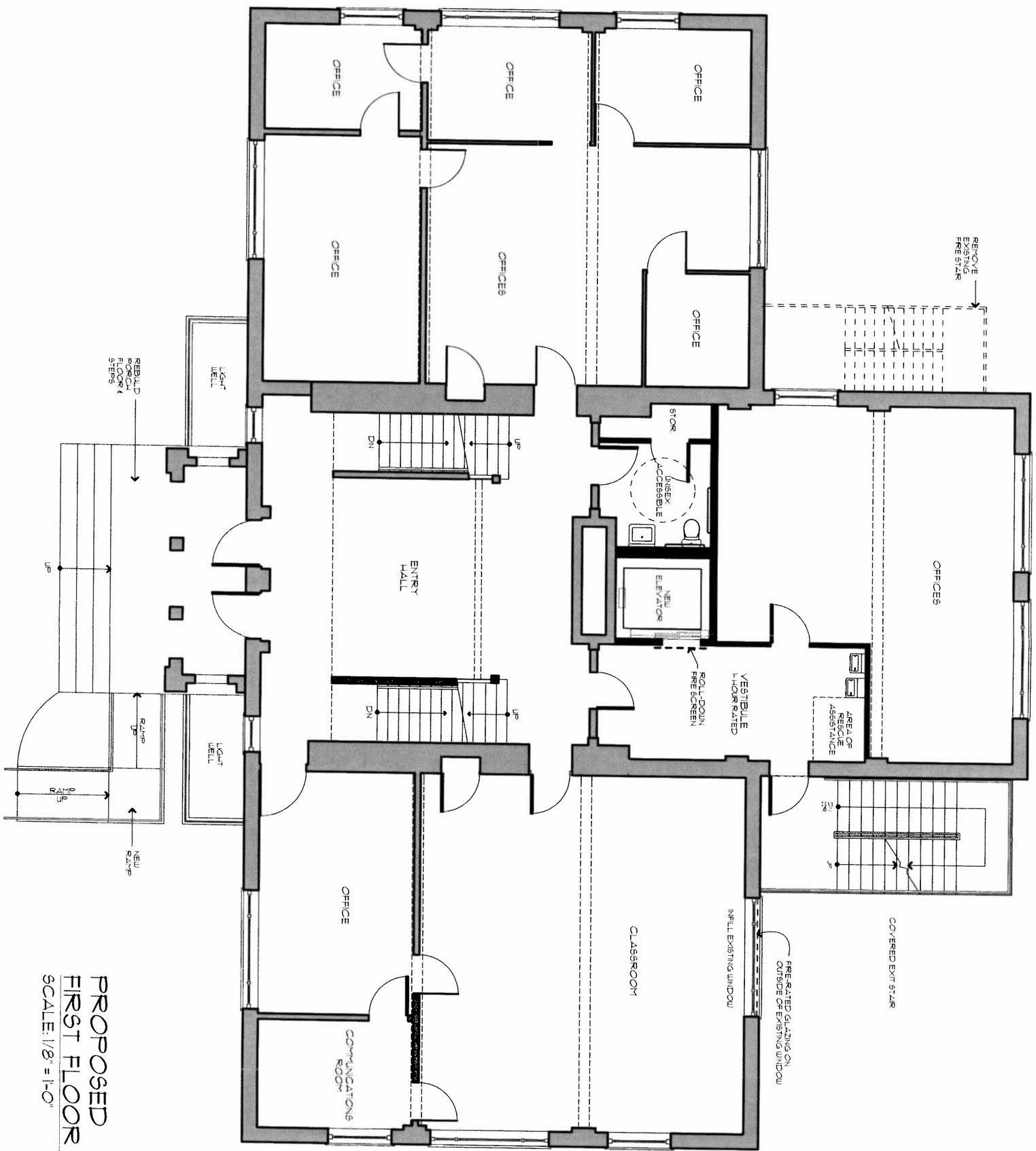
## MARSHBANKS HALL

PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED BASEMENT PLAN




PROPOSED
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

N

# MARSHBANKS HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

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PROPOSED
MAIN
FLOOR
PLAN

Date: March 2006



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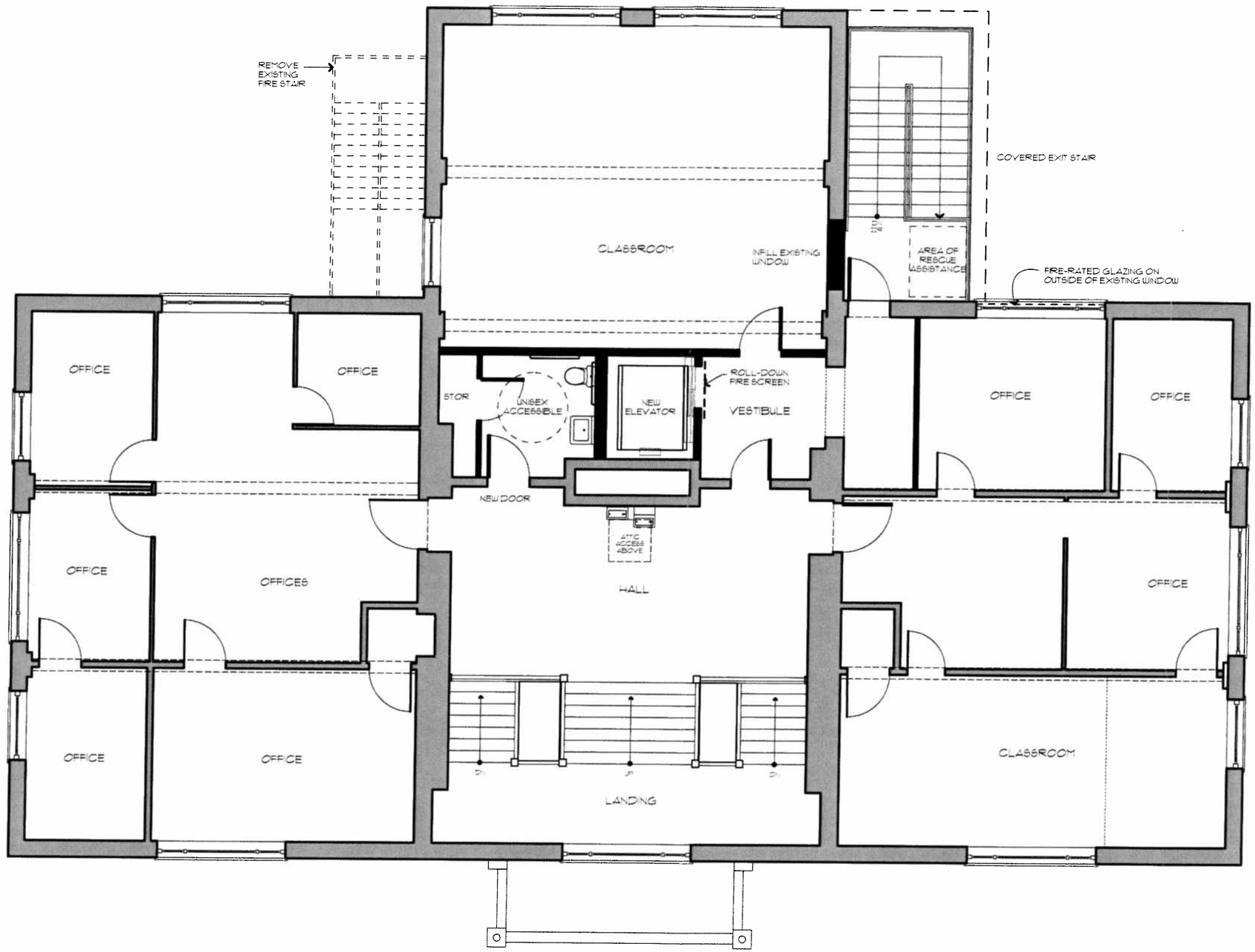


# PROPOSED SECOND FLOOR PLAN

SCALE: 1/8" = 1'-0"

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PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

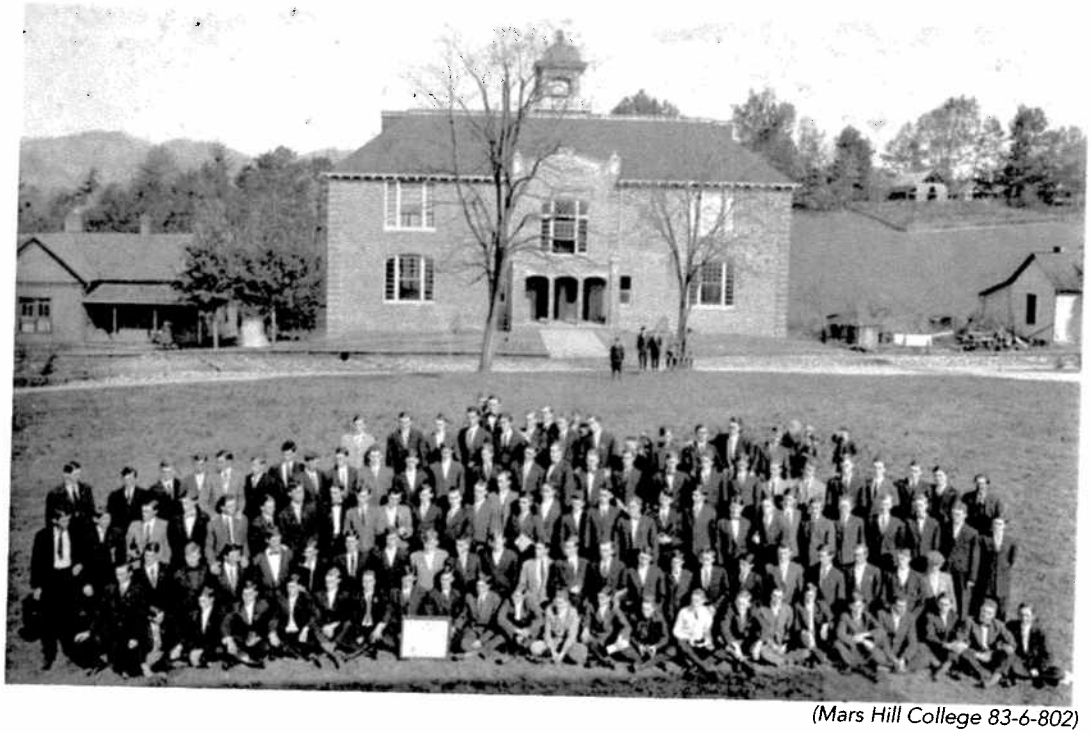
Date: March 2006

PROPOSED SECOND FLOOR PLAN

# MARSHBANKS HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA



*(Mars Hill College 83-6-802)*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# MARSHBANKS HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

## GENERAL INFORMATION

| | |
|---|---|
| **Year Built** | 1909-1910 as Robert Lee Moore Administration Building at a cost of $10,000; occupied January1910;[1] renamed in 1970 |
| **Style** | Classical Revival |
| **Architect** | Martin Egbert Parmalee (1852-1945), Knoxville, Tennessee |
| **Builder** | Beck, Briggs and Anderson |
| **Original use** | Administration Building including offices for the president and dean, business and registrar's office, library, literary societies. |
| **Current uses** | Offices, classrooms |
| **Proposed use** | Offices, classrooms |
| **Building Area** | Basement: 2,987 SF<br>First Floor: 2,987 SF<br>Second Floor: 2,987 SF<br>Total: 8,961 SF |

**HISTORIC SIGNIFICANCE**

First obviously stylish building constructed on campus; cupola is the iconographic symbol of the College.

**HISTORIC CERTIFICATION**

Contributing building within the proposed Mars Hill College Historic District, National Register of Historic Places.

**ARCHITECTURAL SIGNIFICANCE**

Other than Founders Hall, this was the first substantial brick building to be added to the campus after the Civil War. It was constructed to be the symbolic center of the college as it housed the main administration offices. The building has retained this symbolic distinction, although its use has changed and the newer Blackwell Administration Building is the physical hub of the administration today.

Figure 1: Marshbanks Hall.

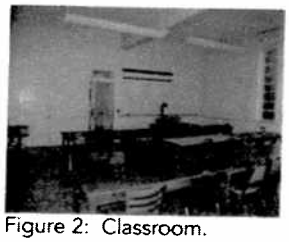


Figure 2: Classroom.

**Exterior**

- Massing (building form) and roofline
- Brick masonry
- Wood windows and doors
- Cupola

**Interior**

- Stairway
- Plaster walls and ceilings
- Wood trim and wainscot
- Wood doors and transoms
- Wood floor (now covered)

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available. Some have been cropped slightly to fit the format of the report.

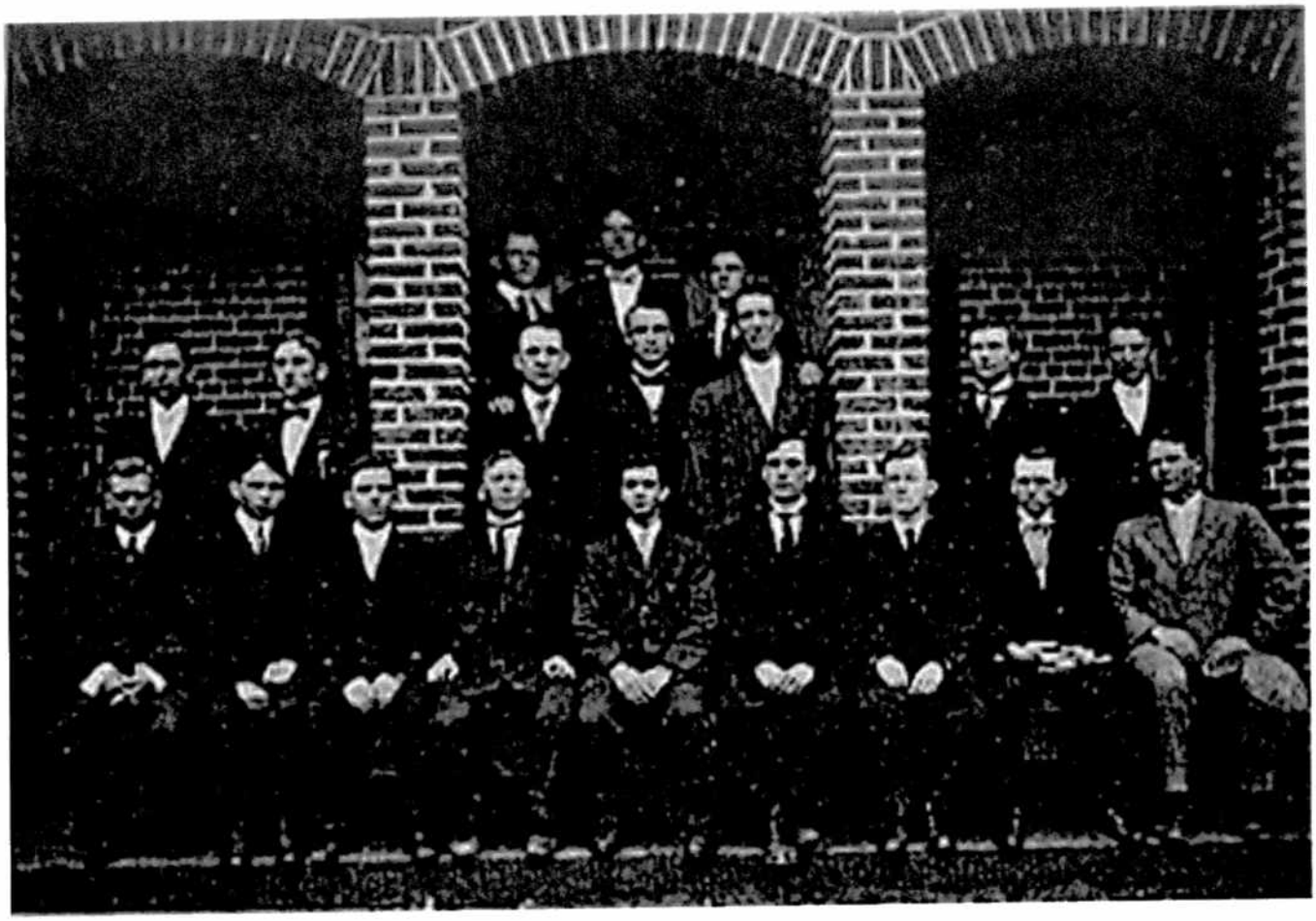


Image 1. 1911. "A group of ministerial students." *(MHC Quarterly, 1911-1912, before p. 49.)*

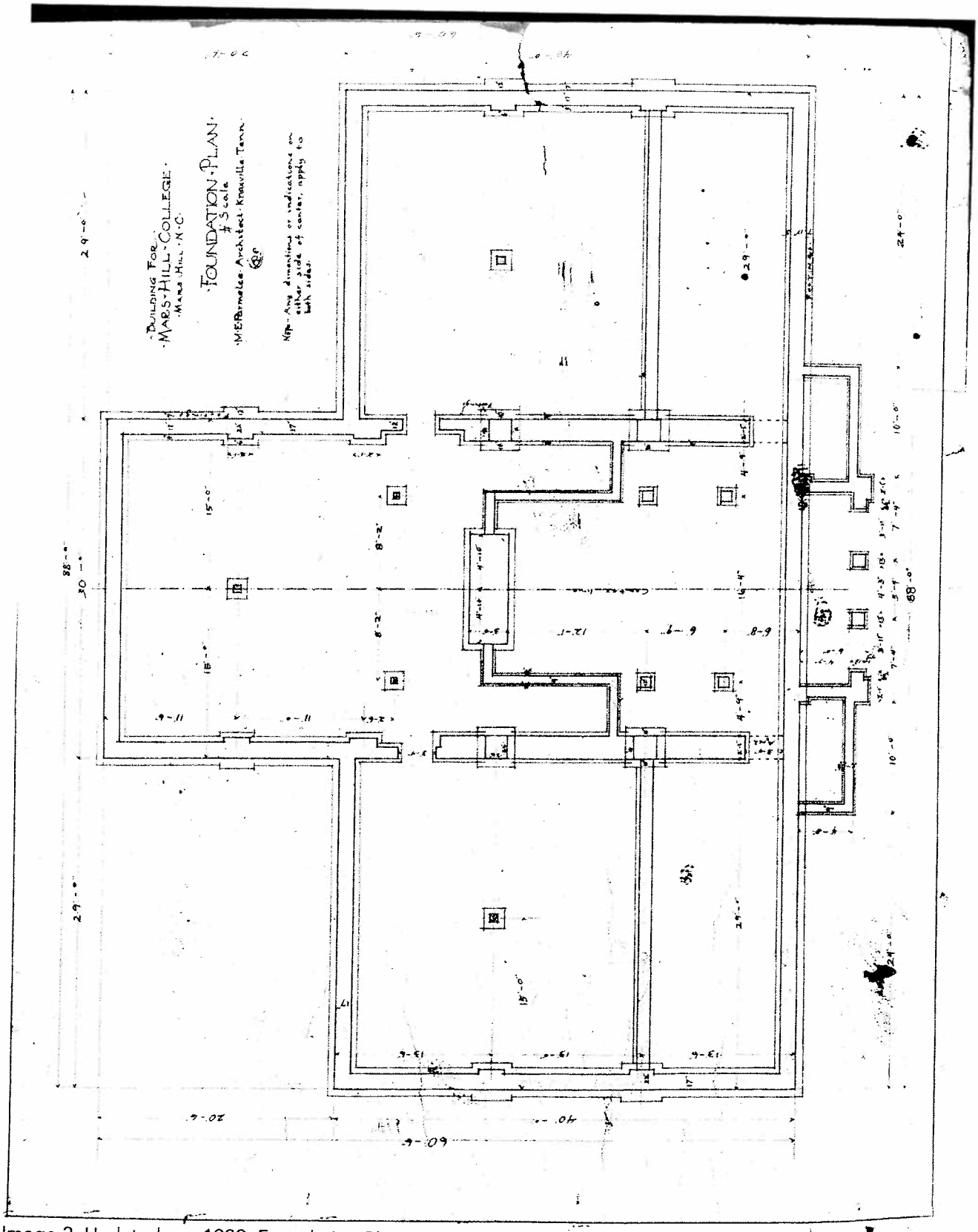

Building For
Mars Hill College
Mars Hill N.C.
Foundation Plan
1/8 Scale
M.E. Parmelee Architect Knoxville Tenn.
Note- Any dimensions or indications on either side of center, apply to both sides.

Image 2. Undated, ca. 1909. Foundation Plan, M. E. Parmelee Architect. *(MHC Facilities Office)*

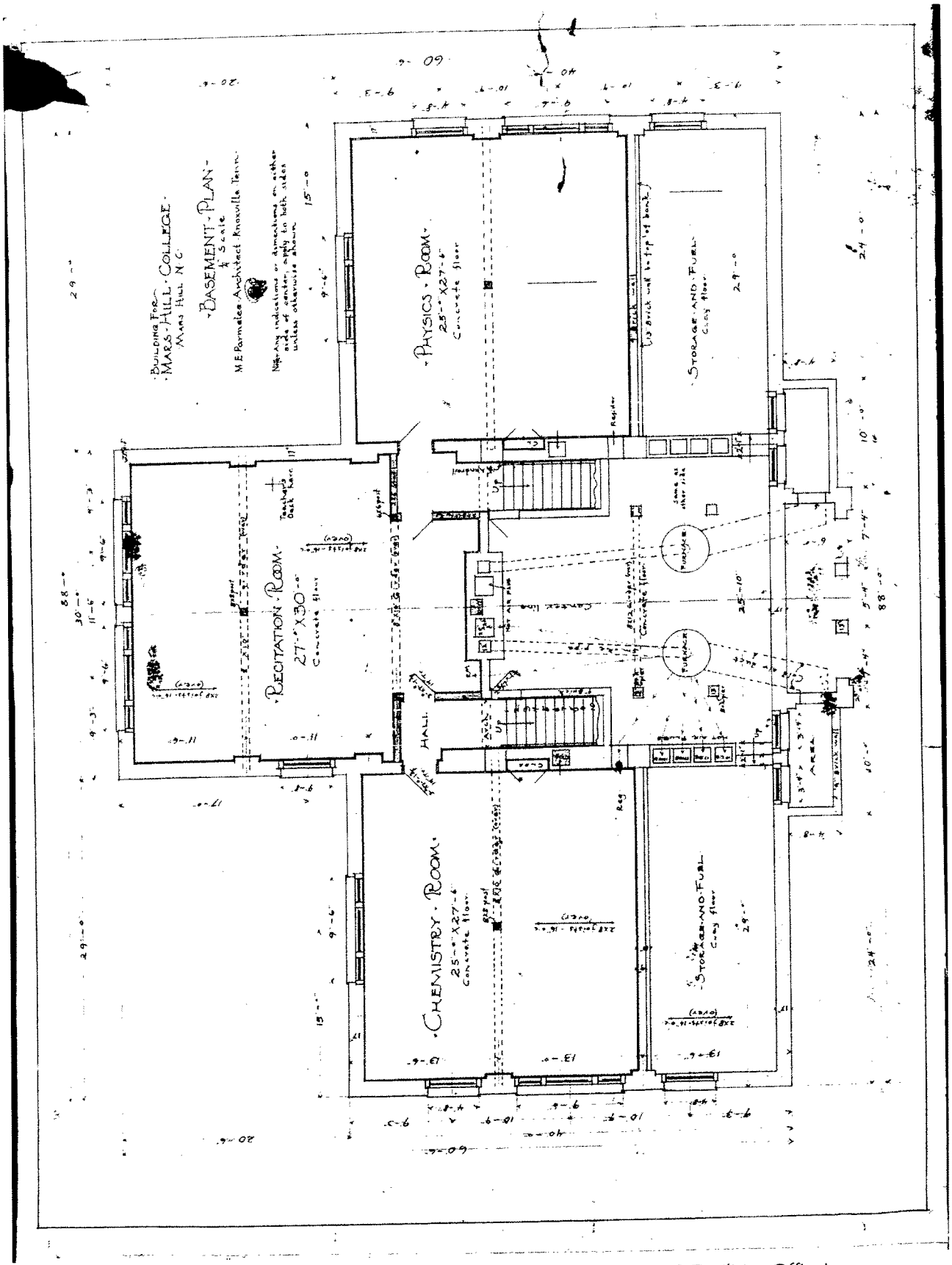



Image 3. Undated, ca. 1909. Basement Plan, M. E. Parmelee Architect. *(MHC Facilities Office)*

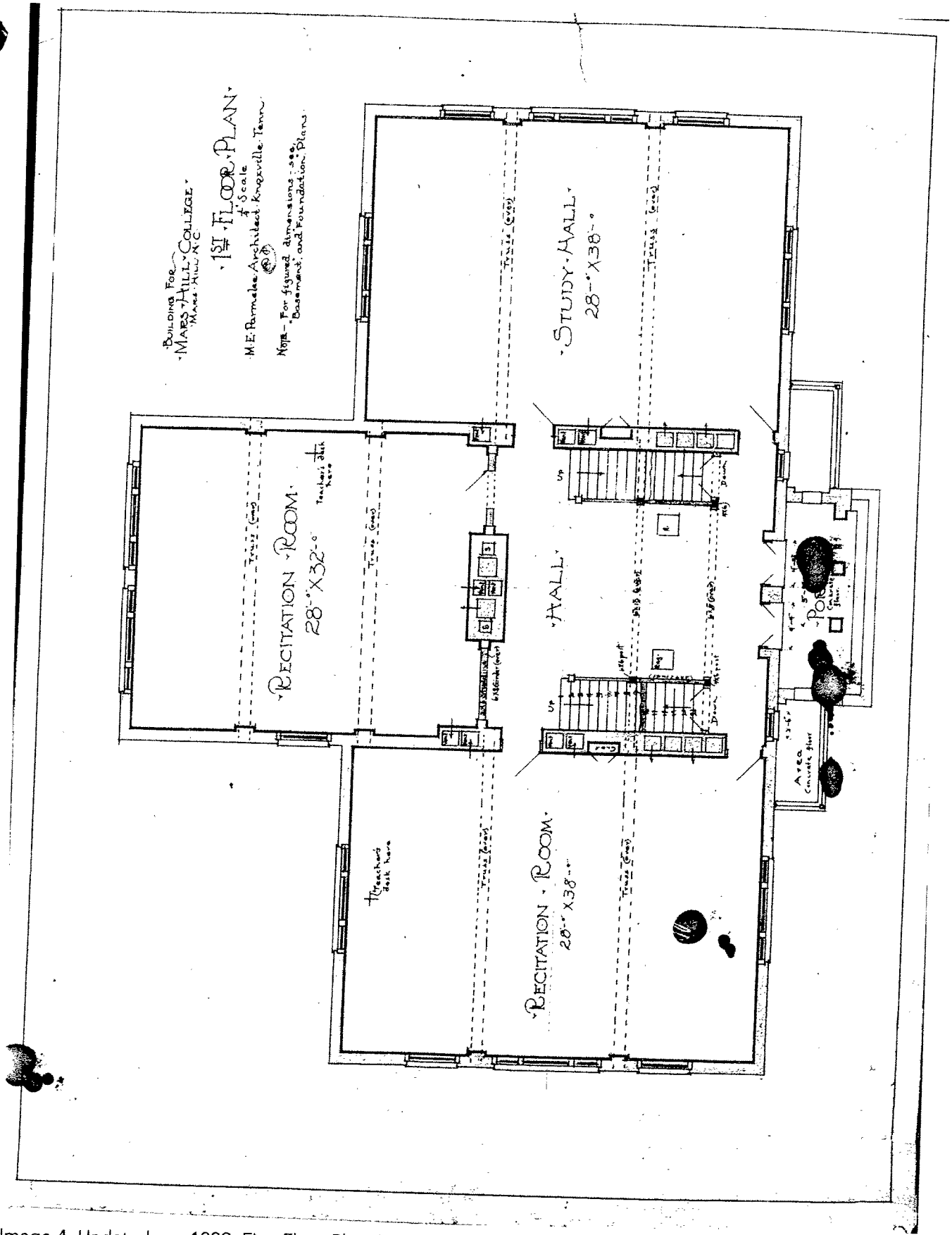



Image 4. Undated, ca. 1909. First Floor Plan, M. E. Parmelee Architect. *(MHC Facilities Office)*

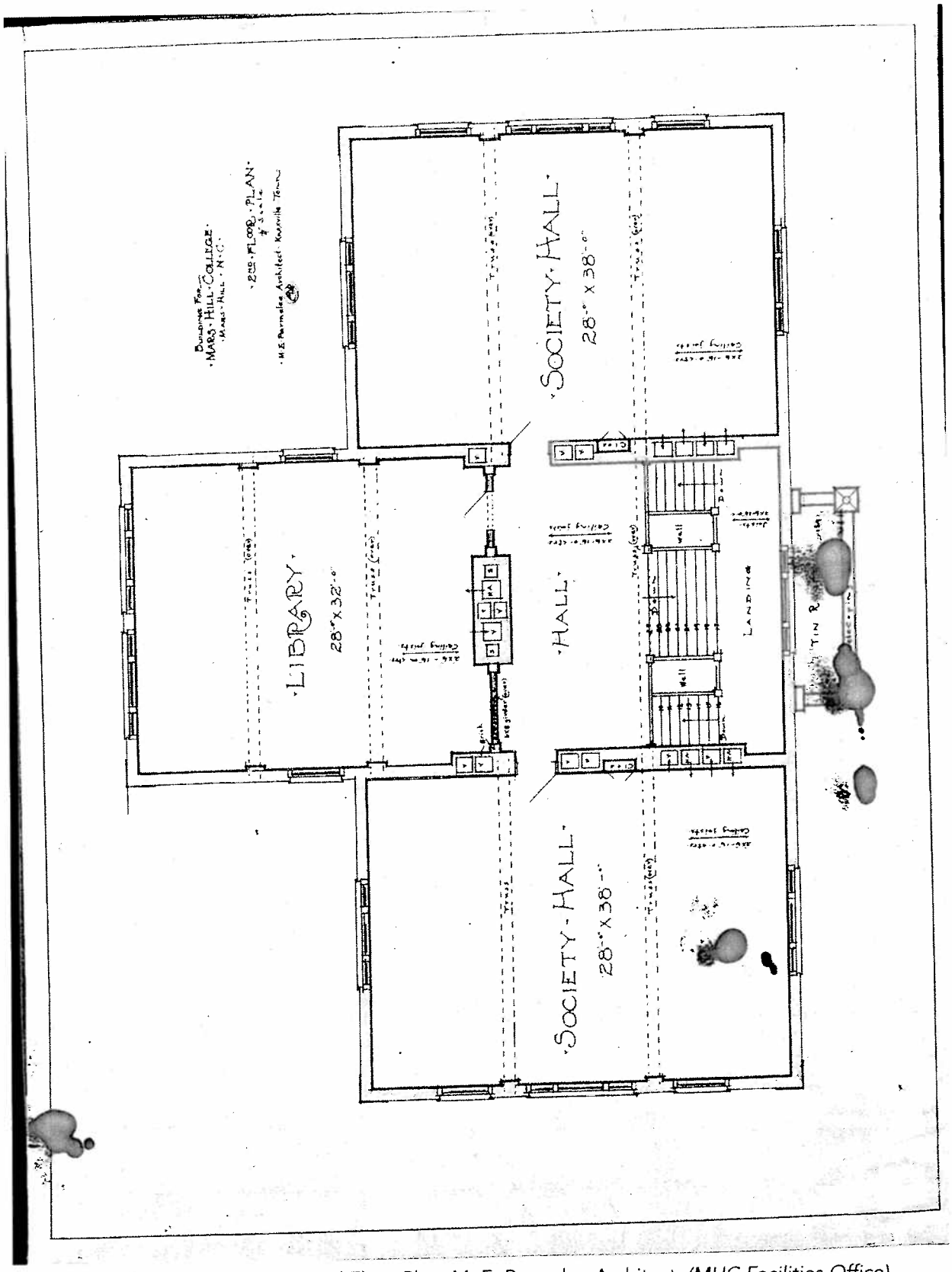



Image 5. Undated, ca. 1909. Second Floor Plan, M. E. Parmelee Architect. *(MHC Facilities Office)*

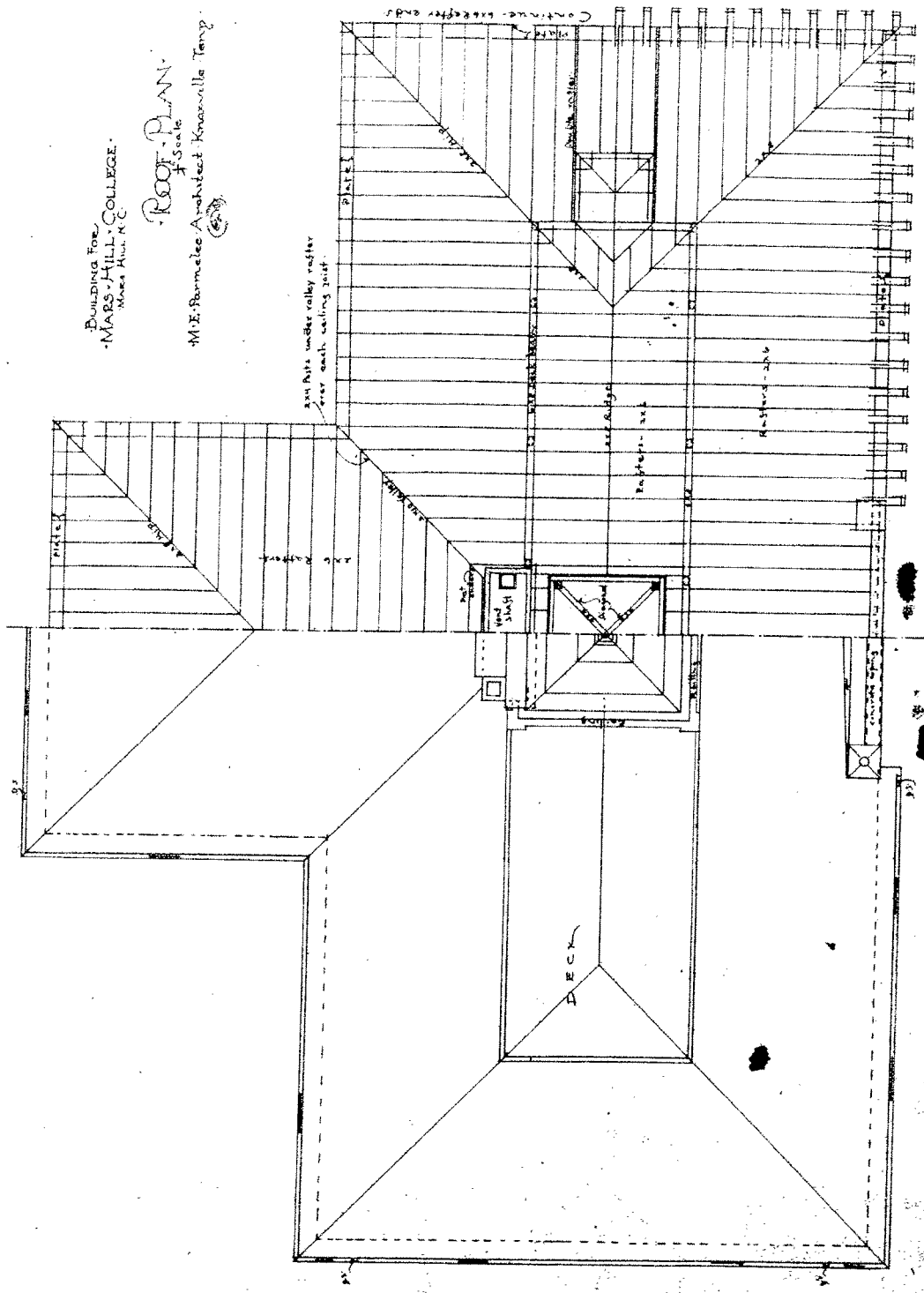



Image 6. Undated, ca. 1909. Roof Plan, M. E. Parmelee Architect. *(MHC Facilities Office)*

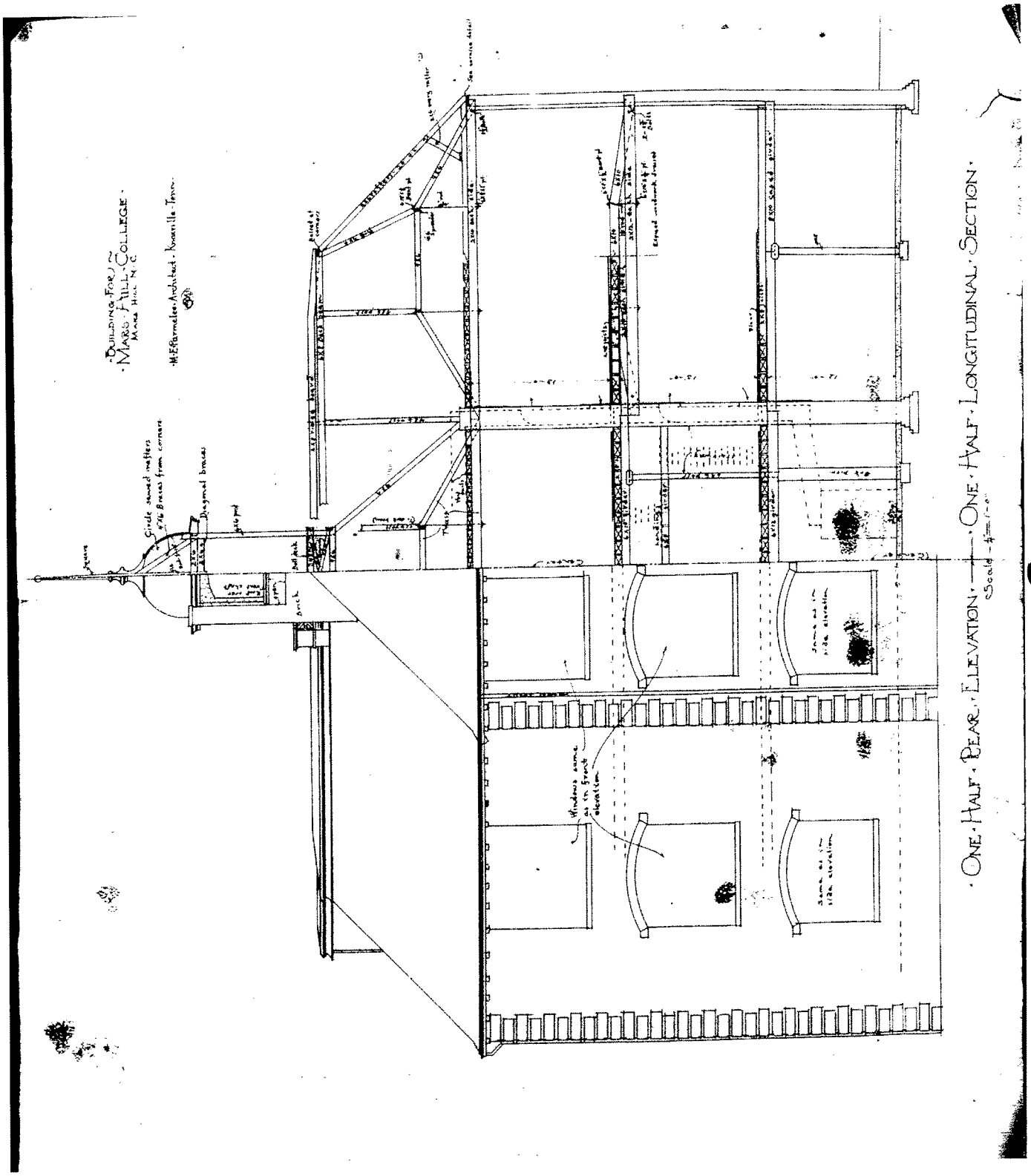



Image 7. Undated, ca. 1909. Rear elevation and longitudinal section, M. E. Parmelee Architect. *(MHC Facilities Office)*

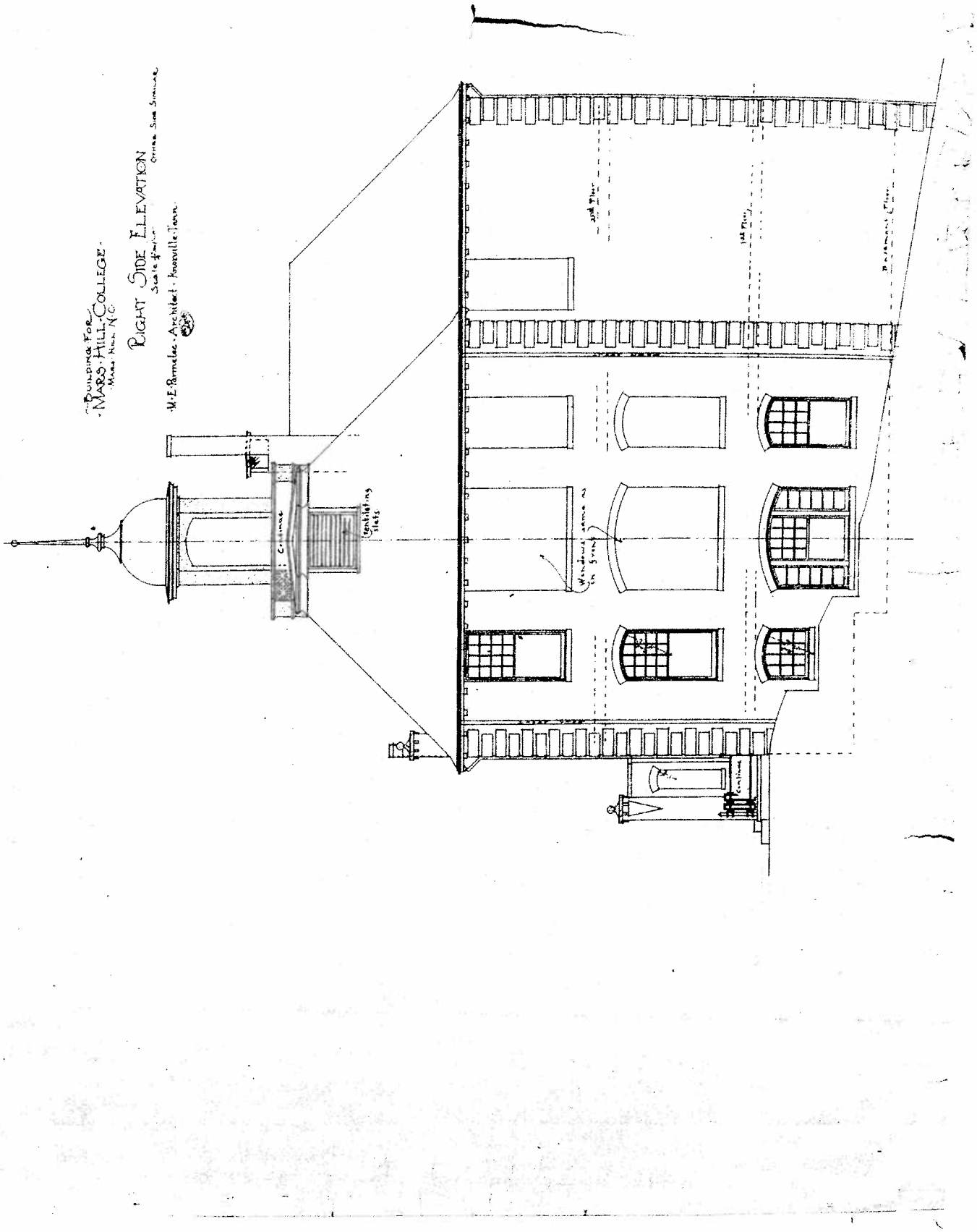



Image 8. Undated, ca. 1909. Right elevation, M. E. Parmelee Architect. *(MHC Facilities Office)*

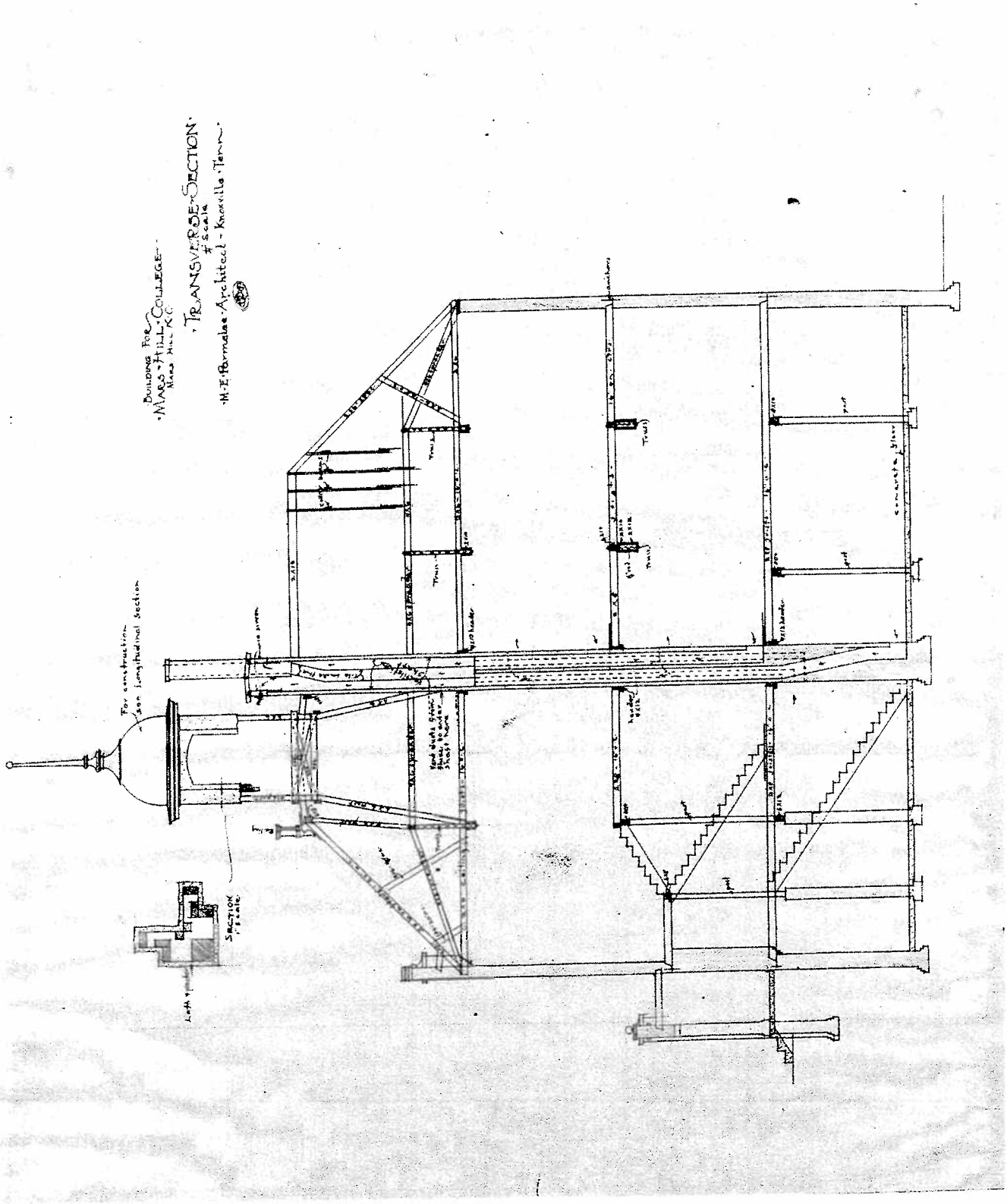



Image 9. Undated, ca. 1909. Transverse section, M. E. Parmelee Architect. *(MHC Facilities Office)*

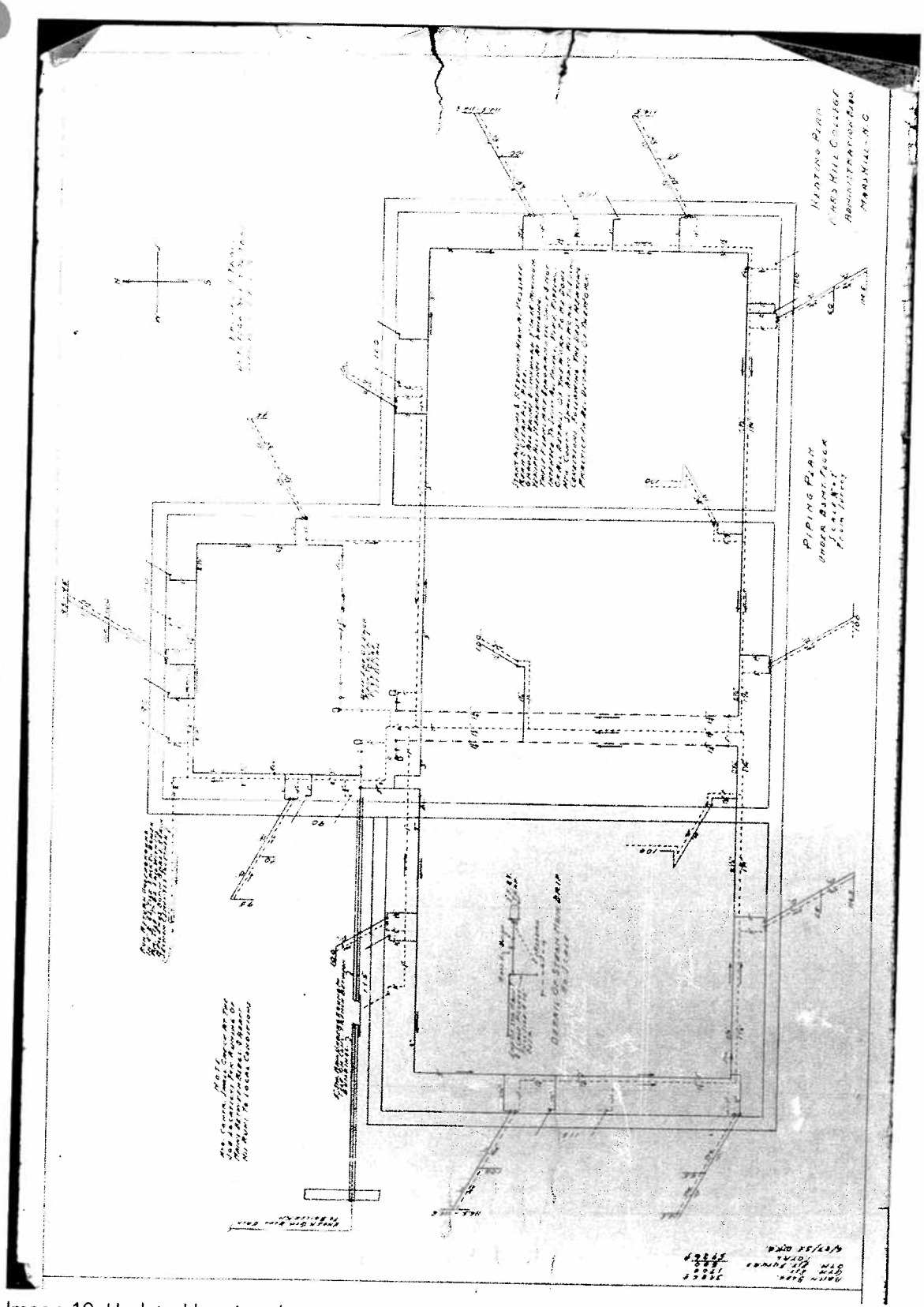



Image 10. Undated heating drawing, "Piping Plan under Basement Floor." Plans are for a radiator system that is heated by a furnace in McConnell Gymnasium. Engineer unknown, note dated 6/27/35 and initialed by W.K.A. *(MHC Facilities Office)*

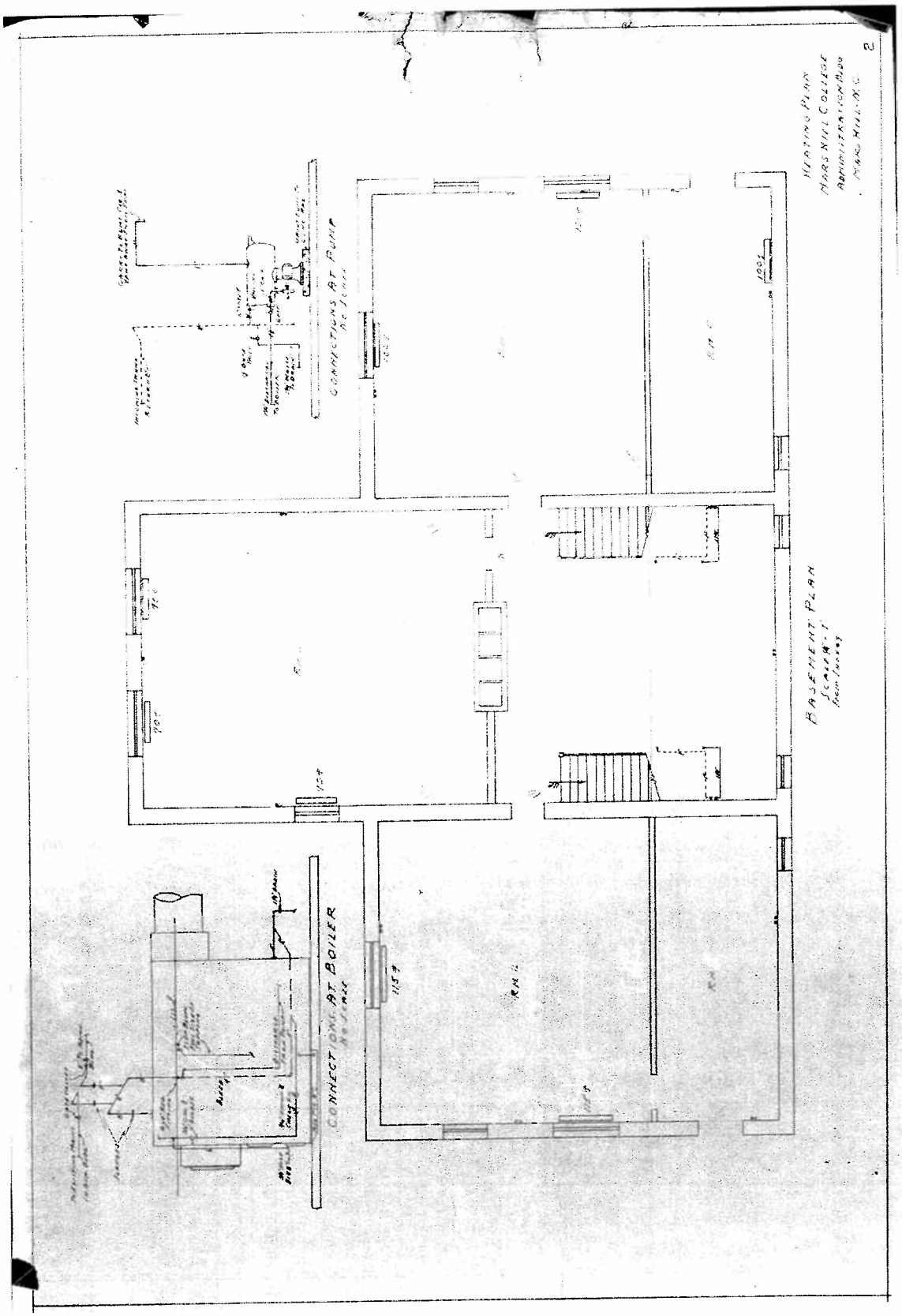



Image 11. Undated heating drawing, "Piping Plan under Basement Floor." *(MHC Facilities Office).*

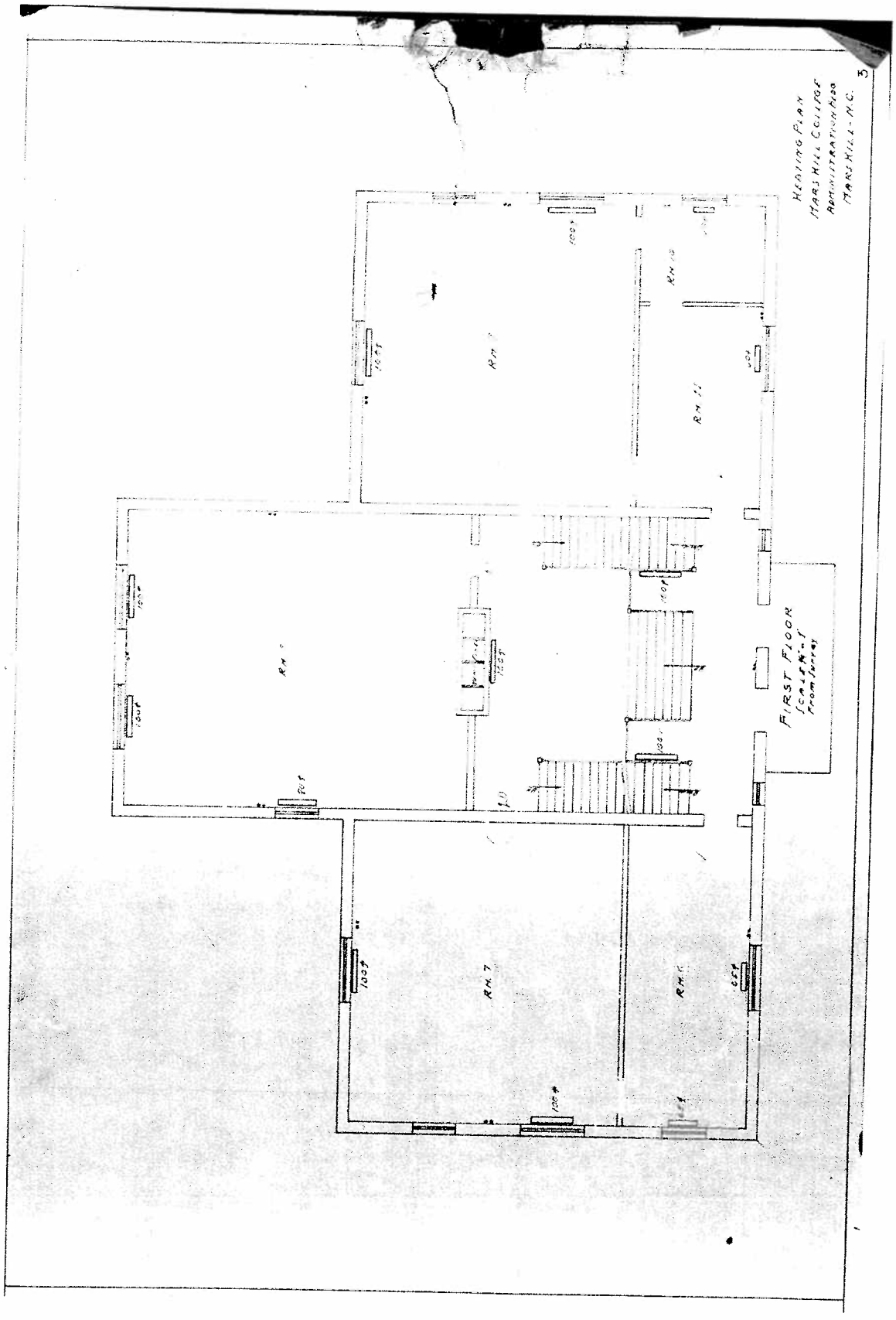



Image 12. Undated heating drawing, "First Floor." *(MHC Facilities Office)*

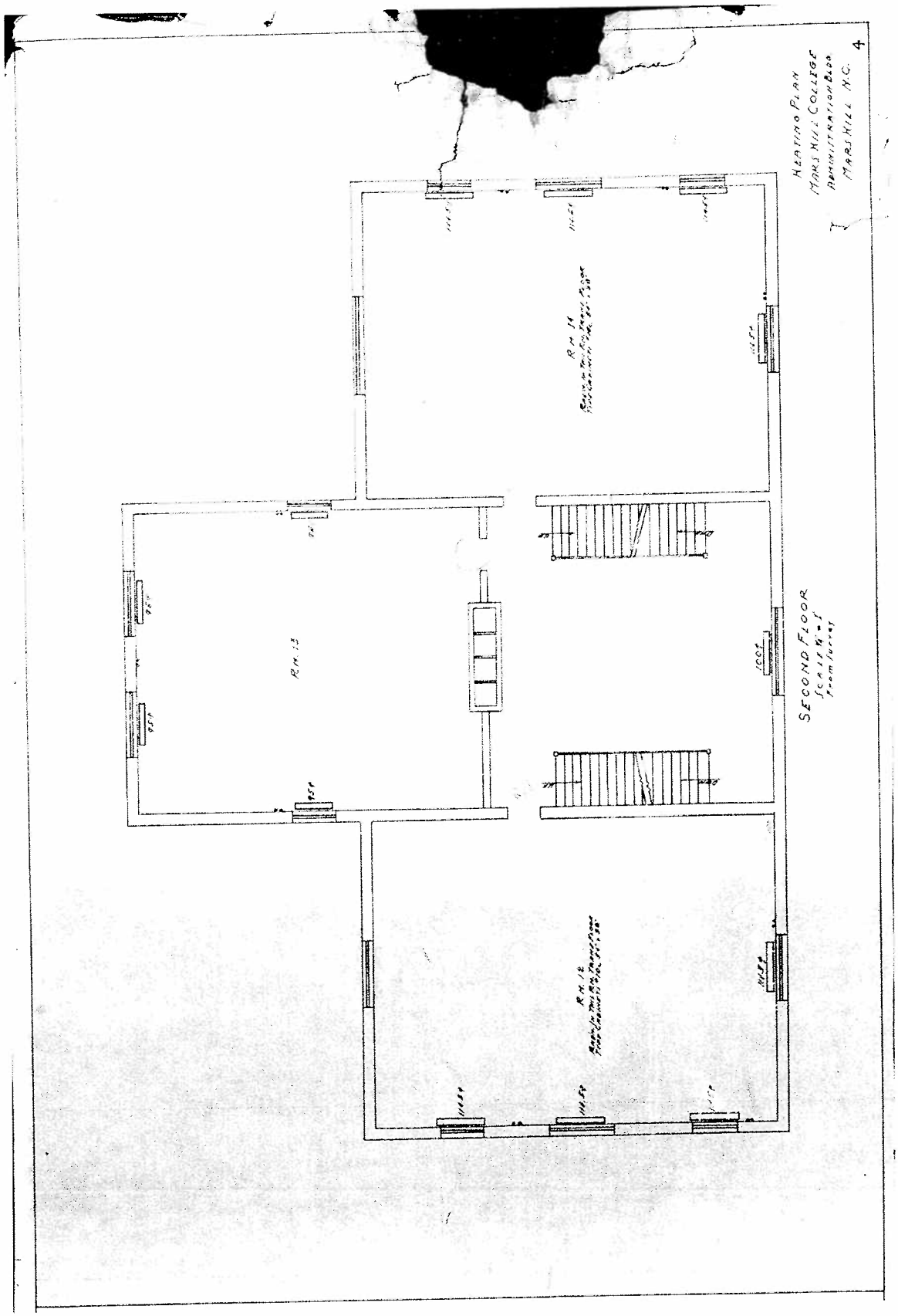



Image 13. Undated heating drawing, "Second Floor." *(MHC Facilities Office)*

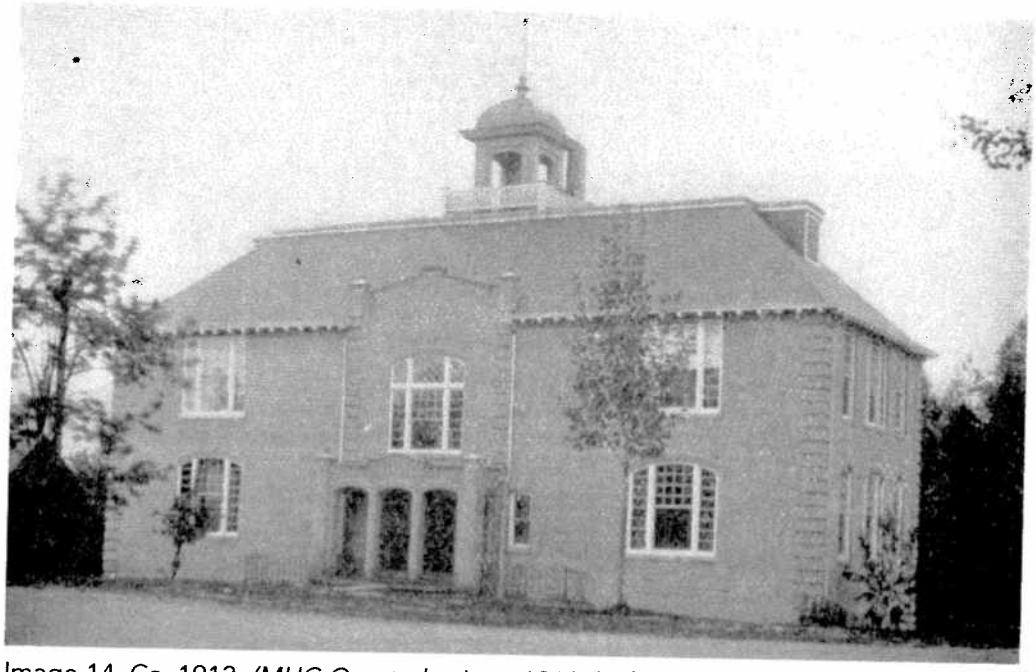


Image 14. Ca. 1912. *(MHC Quarterly, June 1912, before p. 37.)*

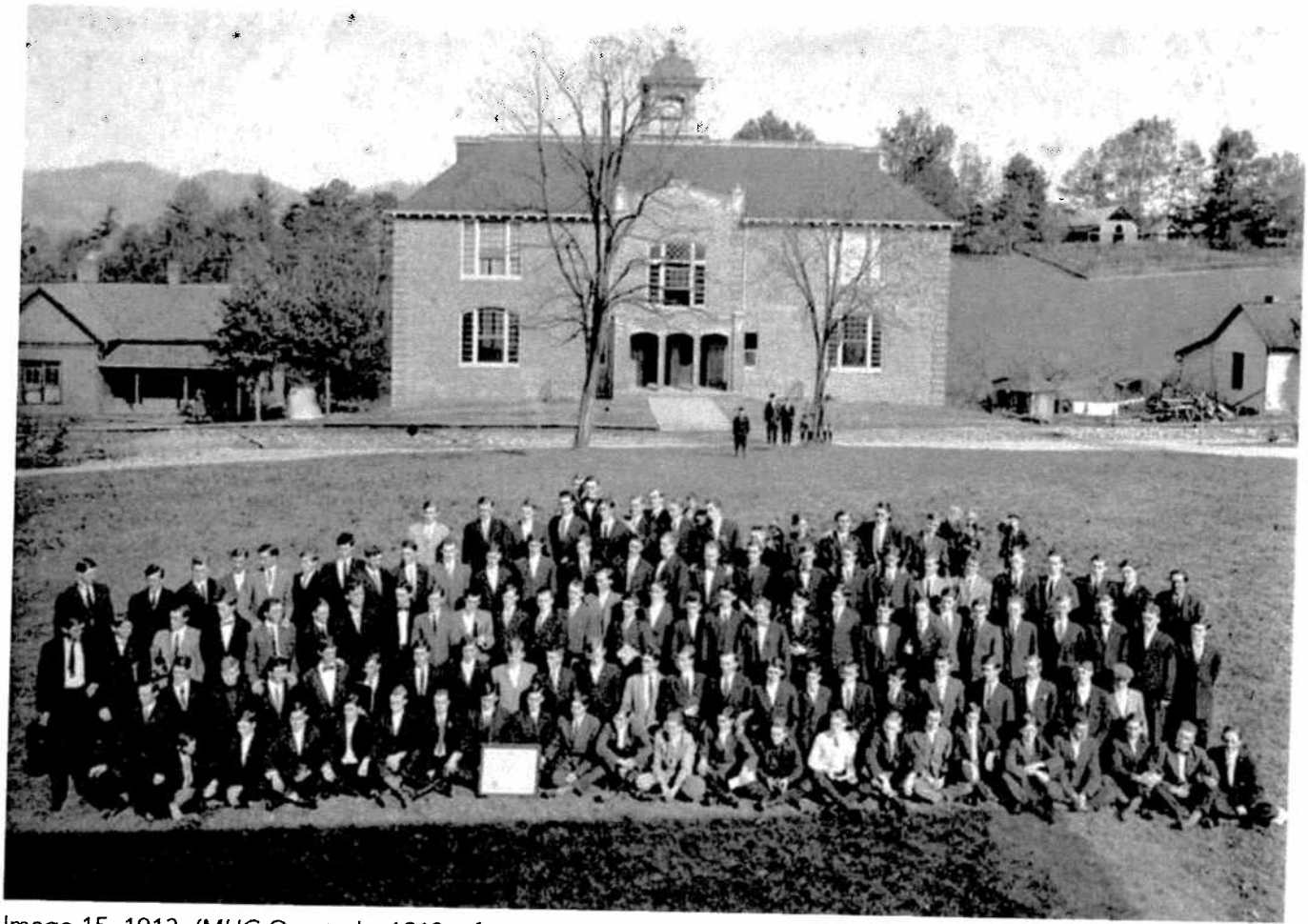


Image 15. 1913. *(MHC Quarterly, 1913, after p.16 and MHC 83-6-802)*

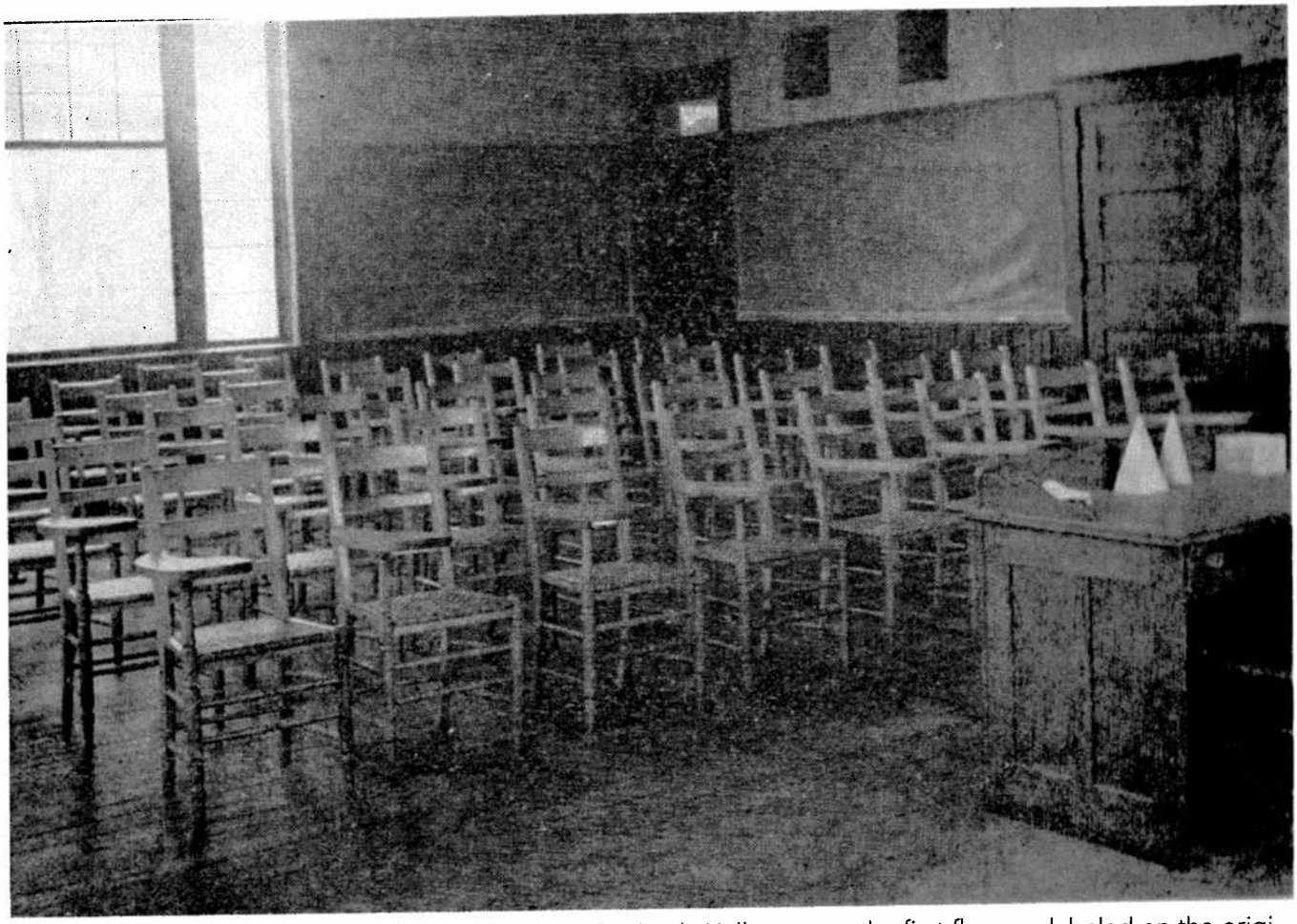


Image 16. Ca. 1914, interior of a classroom. This is the Study Hall room on the first floor, as labeled on the original plans. It the east room and the window faces the Quadrangle.

Note the dark stained wood trim, wainscot, and doors. The middle portion of the wall may be blackboards, although the "wrinkle" in the area on the right indicates a fabric covering. *(MHC Quarterly, June 1914, before p.41.)*

Image 17. Early photo of Moore Administration Building (now Marshbanks Hall). *(MHC 83-6-09)*

Image 18. 1928, Robert Lee Moore Hall, now Marshbanks. Note that a plaque has been added to the face of the portico. *(The Laurel, 1928)*

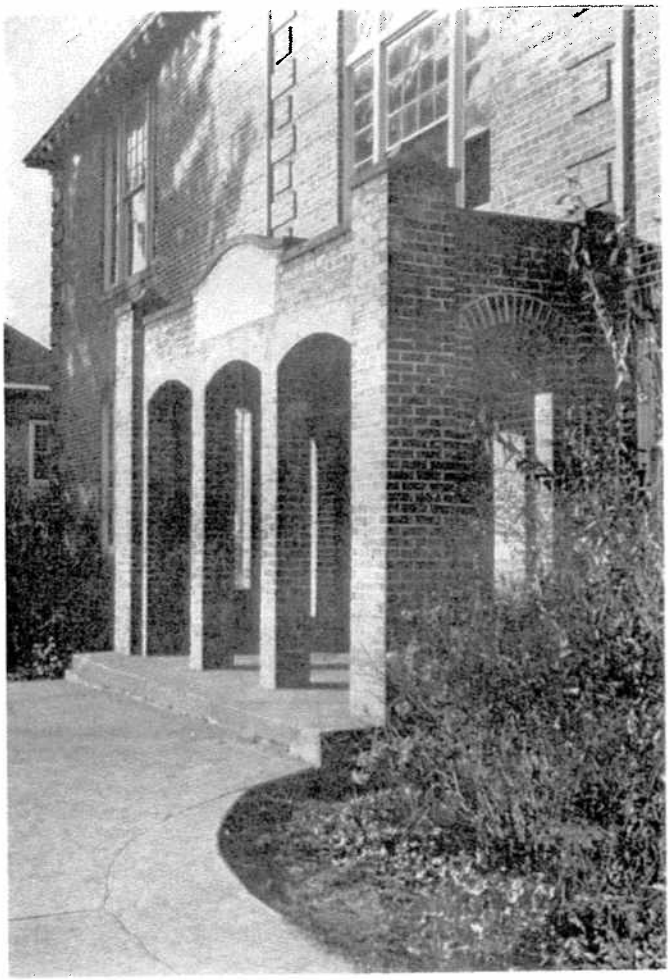


Image 19. 1929. This shows the original details of the front portico, which was designed with only one concrete step. *(The Laurel, 1929, unnumbered page.)*

Image 20. 1935. *(MHC Quarterly, March 1935, before p.16)*

Image 21. 1936. Administration Building. Efflorescence is obvious on the brick parapet over the entrance, indicating water infiltration to the wall. *(The Laurel, 1936)*

Image 22. Undated, early 1950s(?). *(MHC 83-6-461)*

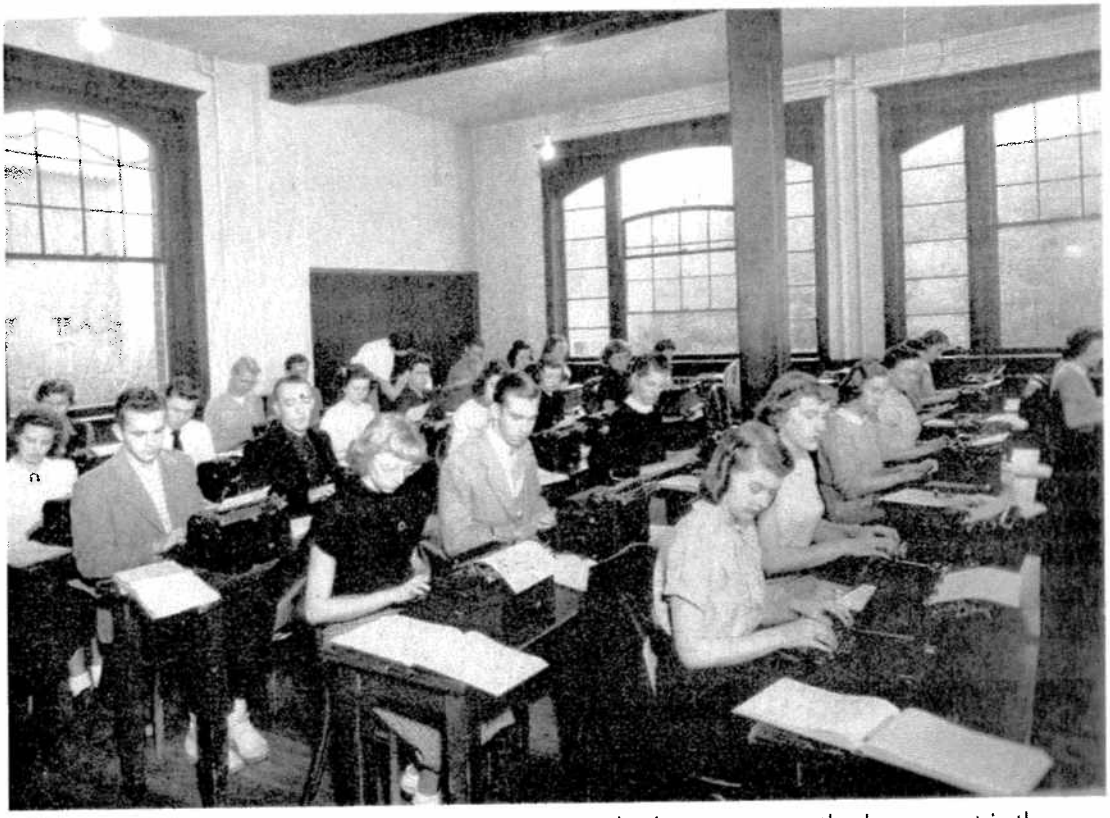


Image 23. 1951, Typing Class. North classroom in the basement, as the basement is the only level with a column in the rooms and the north wing has the only room two tripartite windows next to one another.

Image 24. Undated photo of student typing from a dictation machine. Dark stained wainscot and window trim and plaster wall is behind. *(MHC DN-216c)*

Image 25. Undated administration office, probably1970s. The wainscot on the wall is painted over the original dark stain. (*MHC DN-034-24-1*)

Image 26. Event in the amphitheater, ca. 1960s, with the north (rear) side of Marshbanks in the background. (*MHC DN-box 13b*)

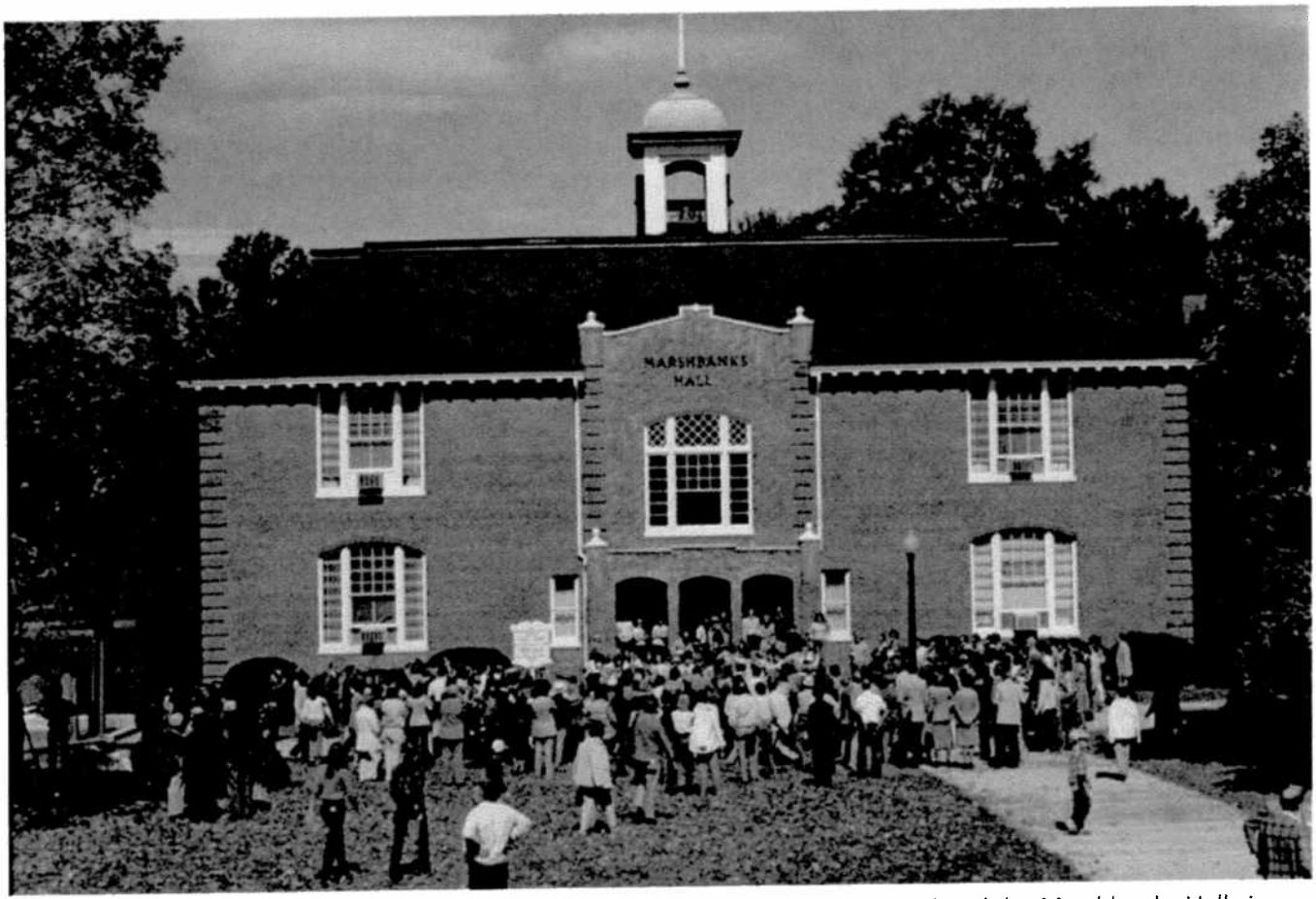



Image 27. Undated, 1970s. Plaque on the front of the portico has been removed and the Marshbanks Hall sign has been installed, which remains today. (*MHC DN-box 20-e*)

## ARCHITECTURAL DESCRIPTION

Marshbanks Hall has not been changed significantly over time and still exhibits most of its original detailing and character. Its basic form, roof-line, and openings are intact, including the original tri-partite double-hung windows which give the building much of its traditional character. The three-bay symmetrical facade and central portico with a pediment at the second floor and cupola add to its collegiate character. The geometry of the square is repeatedly used in the proportions of both the facades and the plan.

Designed with a T-shaped plan, with the top of the "T" facing the Quadrangle, the building is divided into four sections. The central portion is the entry with a double stair on each side, flanked with three wings. These originally contained classrooms on the lower two floors and the college's library and collegiate society rooms on the second floor. The building has been used for administrative offices and classrooms over the past and this use remains today, although the main administrative offices for the college are no longer in the building.

While many of the original construction documents survive, it is unfortunate that they are not a complete set for comparison to both historic photographs and to the existing building today. The most significant missing drawings are three of the elevations, only the east (right) elevation is available. By comparing these drawings, historic photographs, and the existing building there are only two noticeable differences in exterior appearance: a balustrade at the base of the cupola and roofing material.

While the cupola itself appears to have been constructed and remains as it was designed, the construction drawings indicate a low balustrade with solid corners and a diagonally patterned railing, which coordinated with the diamond pattern in the transom over the central window on the front facade. (*Figure 1*) This balustrade was actually constructed with square corner posts and a railing with vertical pickets, which appears to have been taller than the design. (*Figure 2*) This difference is probably due to budget concerns, as the installed balustrade would have been less expensive to construct. The balustrade was removed sometime during the 1940s and 50s, probably as part of a re-roofing effort, and has not been replaced. (*Figure 3*) It is recommended that it be replaced to match the balustrade that was once there.

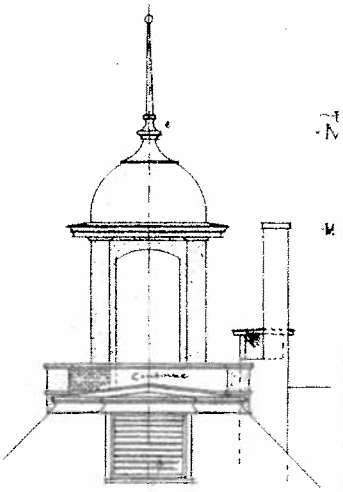


Figure 1: Portion of construction drawing indicating the original design of the balustrade around the base of the cupola. The note in the center is "continue," indicating that the cross design was to be continued.

Figure 2: Portion of image, showing cupola with original balustrade.

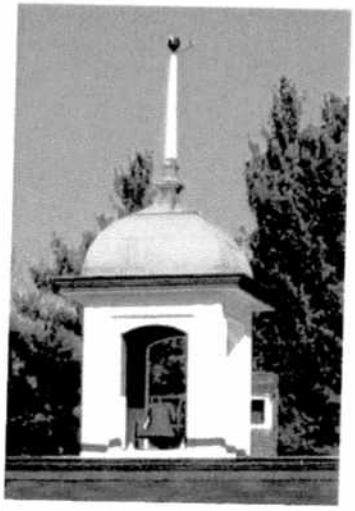


Figure 3: Present cupola without balustrade.

No notes regarding the original roofing material are on the available construction documents, however early photographs indicate a larger shingle that is probably a painted stamped metal shingle like the ones that remain on the sides of the dormers. This has been altered to three-tab asphalt shingles with a membrane roof on the "flat" areas. The difference in the two materials is a change in the width of the vertical lines and the color of the roof. Metal shingles are available today and the roof could be restored in the future close to its original appearance.

Interior changes have been largely due to changes in the use of the building. Some of the original classrooms spaces have been subdivided into offices, but the basic form of the classroom spaces are intact. Most of the alterations are changes in finishes, with carpet and other floor coverings over the original wood floors and paint and wallpapers added to the walls. Wainscot, with a board and batten pattern, is still present on original walls throughout the building and originally had a stained finish. Some of this has been painted white, along with most of the wood trim and doors in the building, which originally matched the wainscot.

The building was originally designed with a forced air heating system, with furnaces in the basement that forced air through chases that were integrated into the walls. This system is shown on the original drawings (*Image 3*). Grilles in the walls that would have delivered the heat to the rooms can be seen in an early photograph of a classroom (*Image 16*). This system must have been unsatisfactory as a hot water radiator system was installed in 1935 that is fed by a boiler in McConnell Gymnasium. This system remains in use today.

## ARCHITECTURAL CONDITION ASSESSMENT

### Exterior

Repair work is needed on most of the exterior brickwork due to weathering and deterioration. There are many areas where the mortar has failed and the brick is powdering and deteriorated. From early photographs of the building, the brickwork has exhibited efflorescence and staining for most of its history, especially on the front portico. Repair work will include cleaning; removal of deteriorated mortar; replacement or patching of deteriorated brick; and repointing.

An important character defining feature of the building are the large window openings with a tri-partite pattern that includes a center double-hung 16/1 window with 8 light fixed sidelights on the first and second floors and shorter 12/1 double-hung windows with 6 light sidelights at the basement. First floor and basement windows are arched while the second floor windows have a flat head. The center window on the front facade has a transom with diamond-pattern and additional single width double hung windows complement the larger openings. All of the windows appear to be original and should be carefully restored. Insulating and protecting these windows is suggested by installing operable interior storm windows.

The front doors are original, but have suffered from heavy use and multiple repairs including changes in hardware. These should be restored or replicated and the hardware, which is not original, should be changed to meet code and to be more appropriate to the building. Only two other exterior doors are on the building, one on each side toward the front of the building. Both provide access to storage areas with raised floors that are not accessible from the interior of the building. Both of these are in need of repair. The one on the west side is overgrown with vines.

A bracketed wood soffit crowns the building on all sides and appears to be in good condition on the front and sides of the building (*Photo 9*). The rear, however, is obvi-

ously in poor condition. It would be prudent to thoroughly inspect the entire soffit and make repairs (*Photo 10*). Gutters appear to be in good condition and while these have probably been replaced over the years, they are in original locations and appear to be the same as the original shapes.

The roof appears to have been replaced relatively recently and has asphalt shingles on the sloped portions and a membrane roof on the flat, upper portions. A sheet copper roof covers the cupola. The entire roof appears to be in good condition and there are not currently any known leaks.

There are problems in the installation of the membrane and some light fixtures, however. The membrane is wrinkled in many places and was simply not installed properly. This creates areas where water will sit in puddles, rather than draining off the roof. In addition, there are light fixtures mounted on boards that appear to be just sitting on the roof and are not attached. This is violation of the electrical code.

**Interior**

Comparing the original floor plan to the existing plan indicates that the changes to the building have been made within the confines of original classrooms. Some of these have been subdivided for office space with new partial and full-height partition walls. Fortunately the original classroom walls and most of the original wainscot and trim have been left in place. The remaining classroom spaces retain most of their original character and architectural elements.

The lobby and double monumental stair is original and is an important feature of the building. It has been painted white, like most of the trim, although it may have originally had a dark stain. Risers and treads have been covered with carpet and vinyl nosings due to the heavy traffic in the building. These details unfortunately alter the historic character of the space.

Original doors have five horizontal panels and are trimmed with simple wood casings with a flat header and transoms. These were also originally stained dark, rather than painted. Unfortunately most of the original door hardware has been removed and replaced with utilitarian locksets that are not appropriate to the period of the building. In addition, many doors have multiple signs mounted to them, with a haphazard appearance.

The building originally had wood floors which have been covered over with wall-to-wall carpet and vinyl tile.

## CURRENT PHOTOGRAPHS

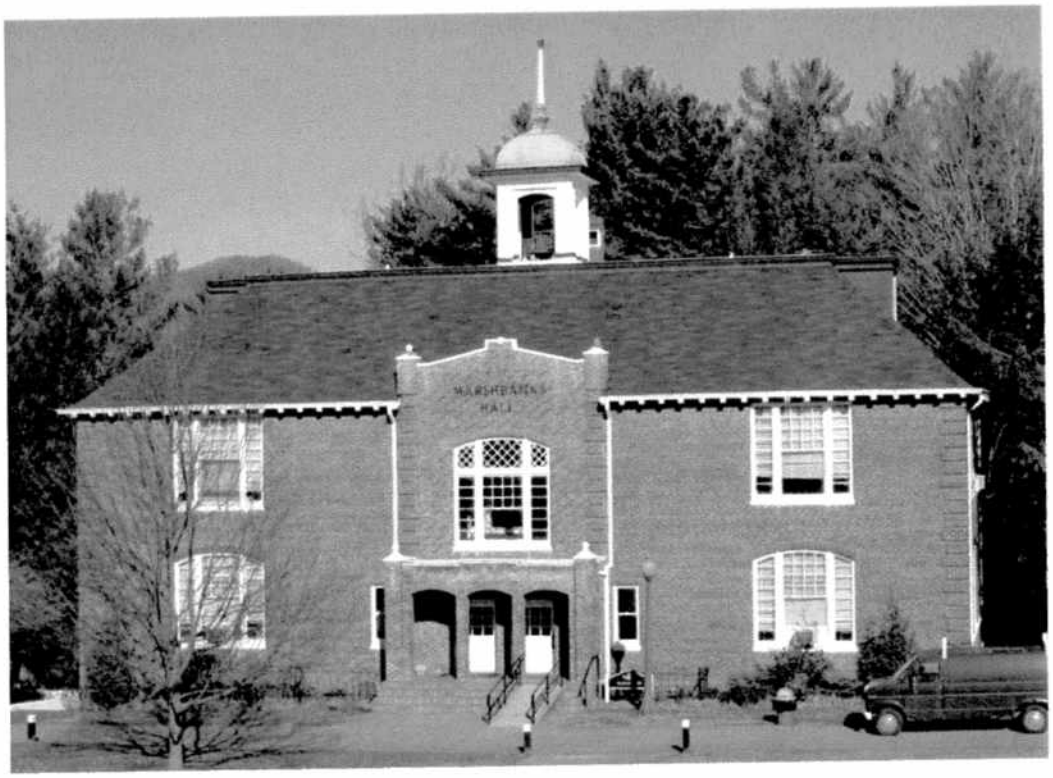


Photo 1. South (front) facade.

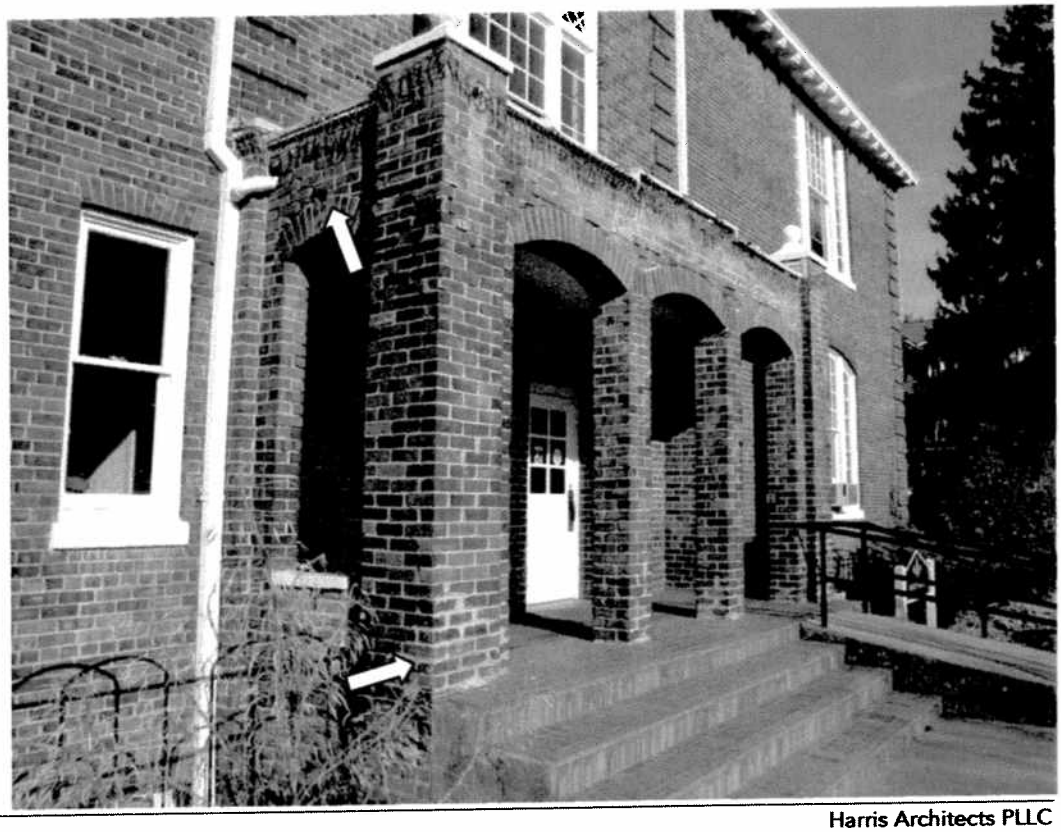


Photo 2. Entrance porch Top arrow is pointing to area of missing mortar and the bottom arrow is pointing to an area of brick that has been patched with incompatible mortar. The front of the portico is stained. These problems are typical of other areas that need to be cleaned and repaired.

The tile on the steps and the ramp are not original. Grade has been lowered, as there were only two risers to the porch when the building was constructed. The ramp does not meet current code requirements.

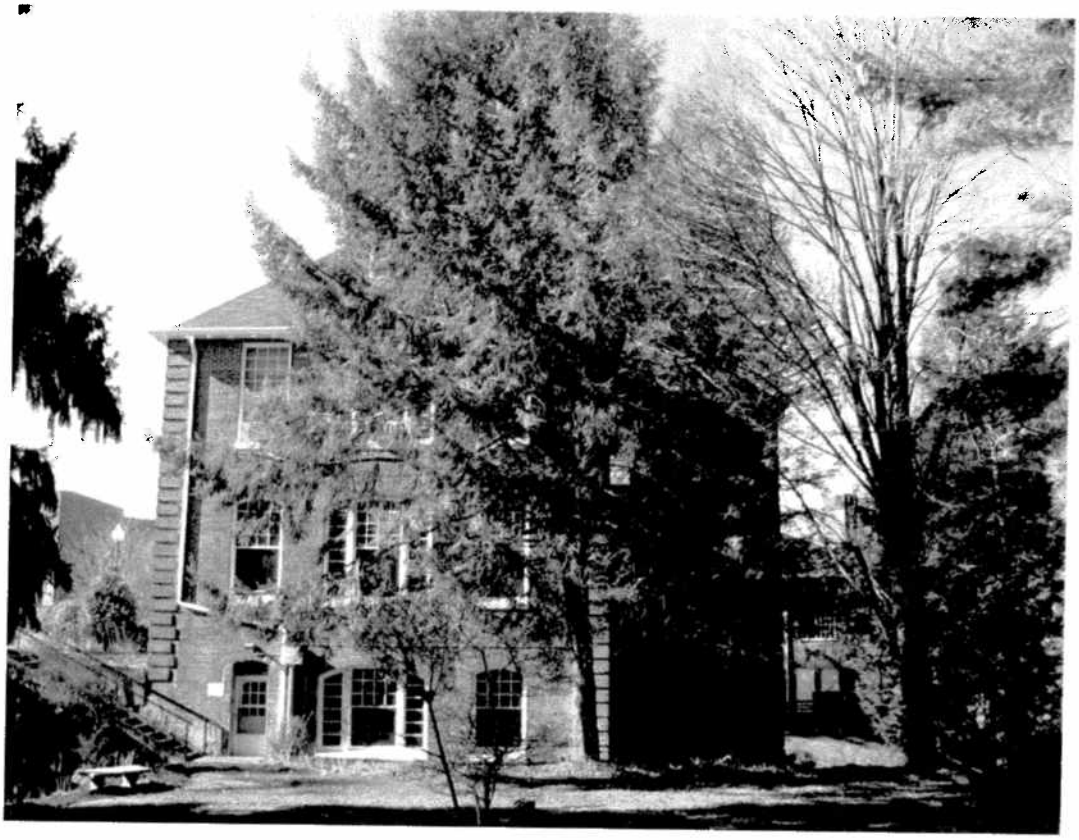


Photo 3. East facade.

Photo 4. East and south facades.

Photo 5. South facade.

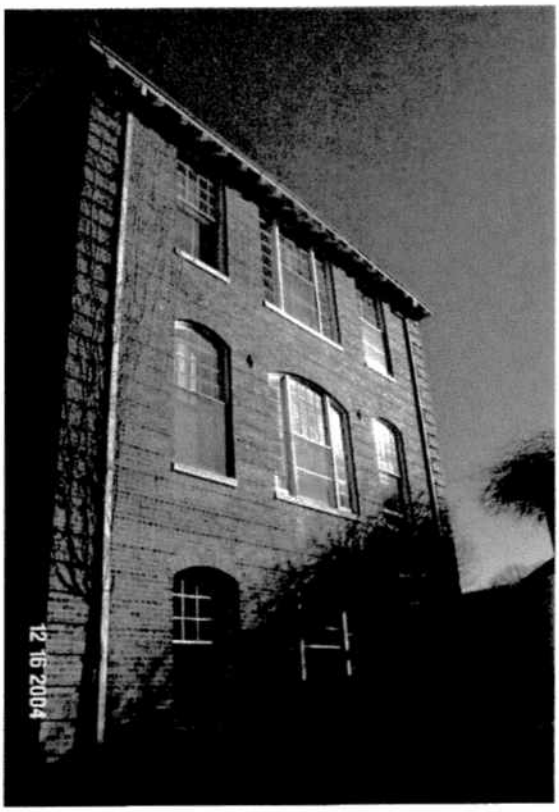



Photo 6. East facade.

Photo 7. Detail of west facade showing staining of the walls from paint on the sills. Brickwork is also deteriorated and one brick is missing from the arched window head.

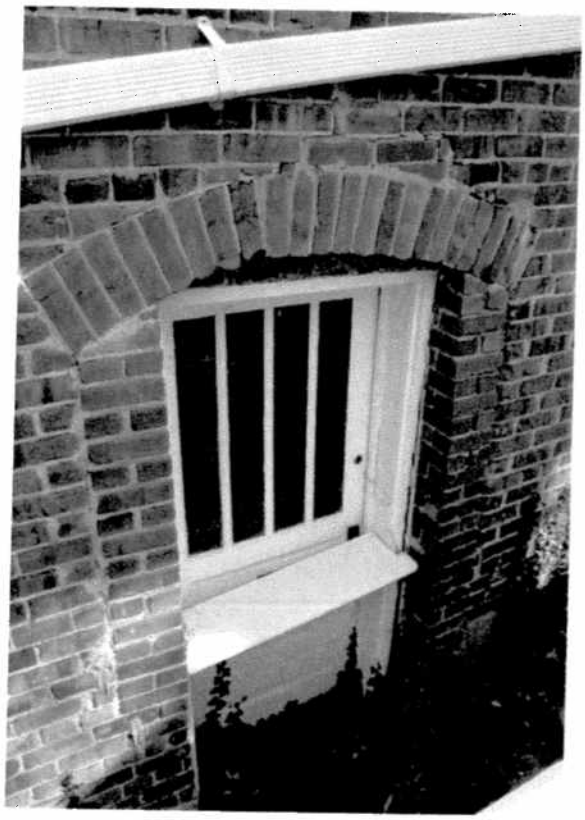


Photo 8. Lower level door on west facade at a stairwell. Plants are growing in the stairwell and up the door.

Photo 9. Eave detail at south facade.

Photo 10. Eave detail at the north facade, which is very bad condition and needs to be repaired. The gutter is very damaged and water is entering the wood soffit area, causing further damage.

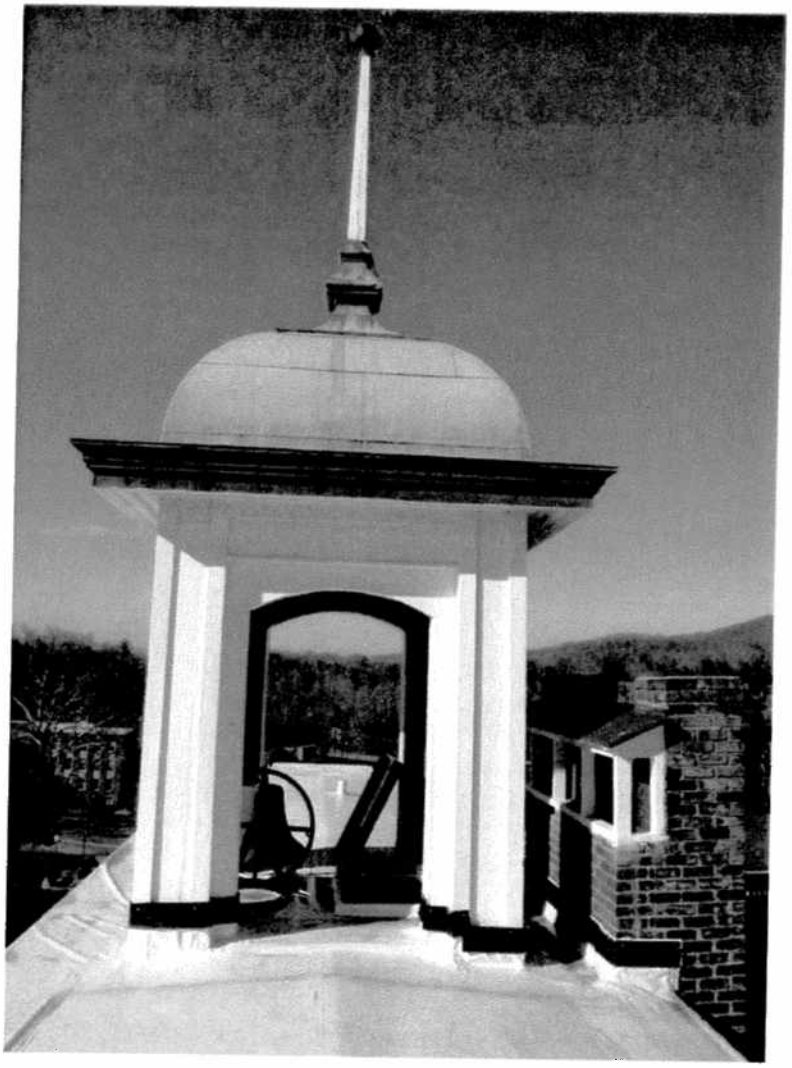


Photo 11. Roof and cupola.

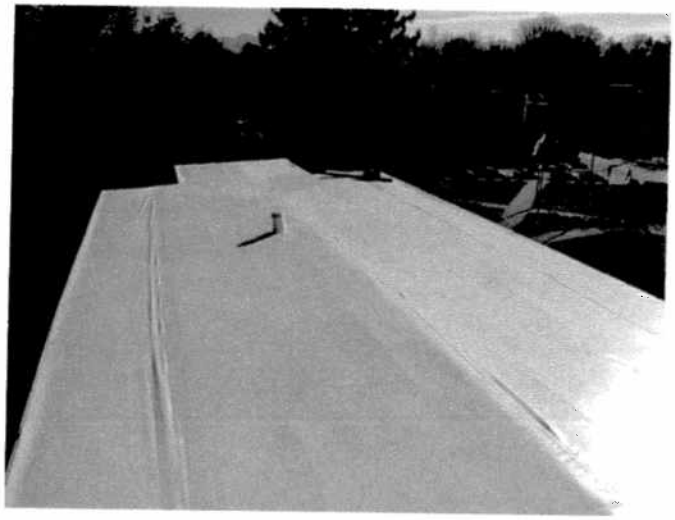


Photo 12. East side of roof.

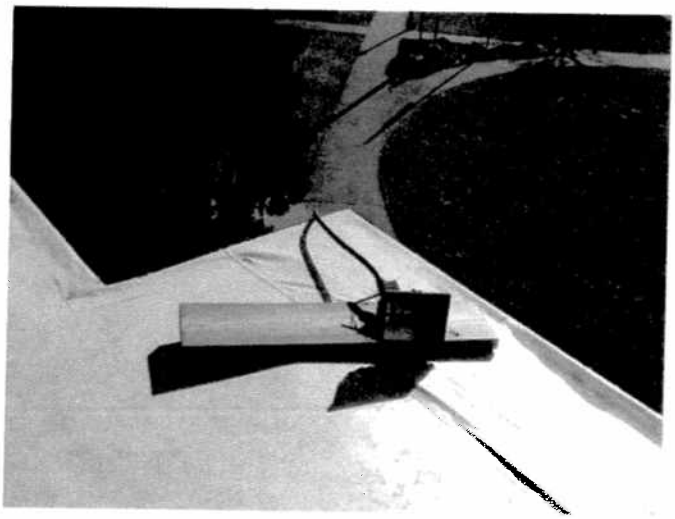


Photo 13. East side of roof with spotlight that appears to be attached to a board that is simply lying on the roof. The light should be permanently mounted.

Photo 14. Detail at chimney. The sides are open and should be screened to keep insects and animals out. This area could be enclosed if the chimneys are not active.

Photo 15. Detail at bell. The roof membrane is wrinkled in this area and sealant is heavily used. These conditions do not meet good standards.

Photo 16. Parapet at the front entrance. Flashing behind the parapet should be inspected and repaired regularly to prevent leaks. The cloth on the finials are boxer shorts, which were apparently placed there as a prank.

Photo 17.

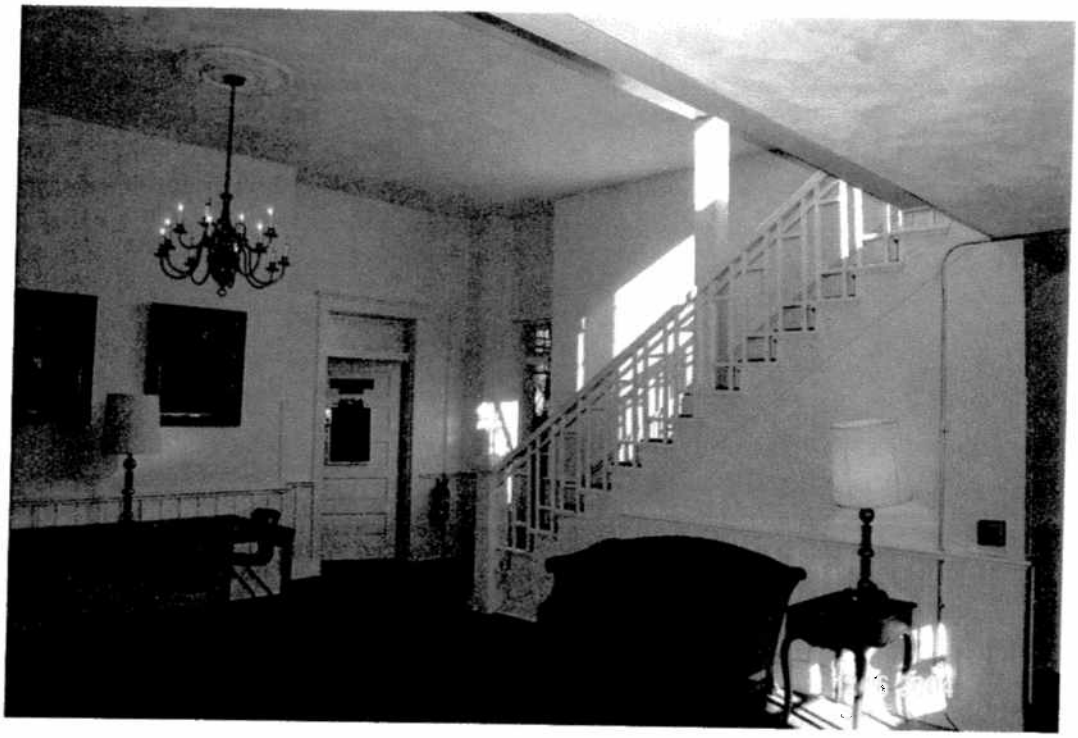


Photo 18.

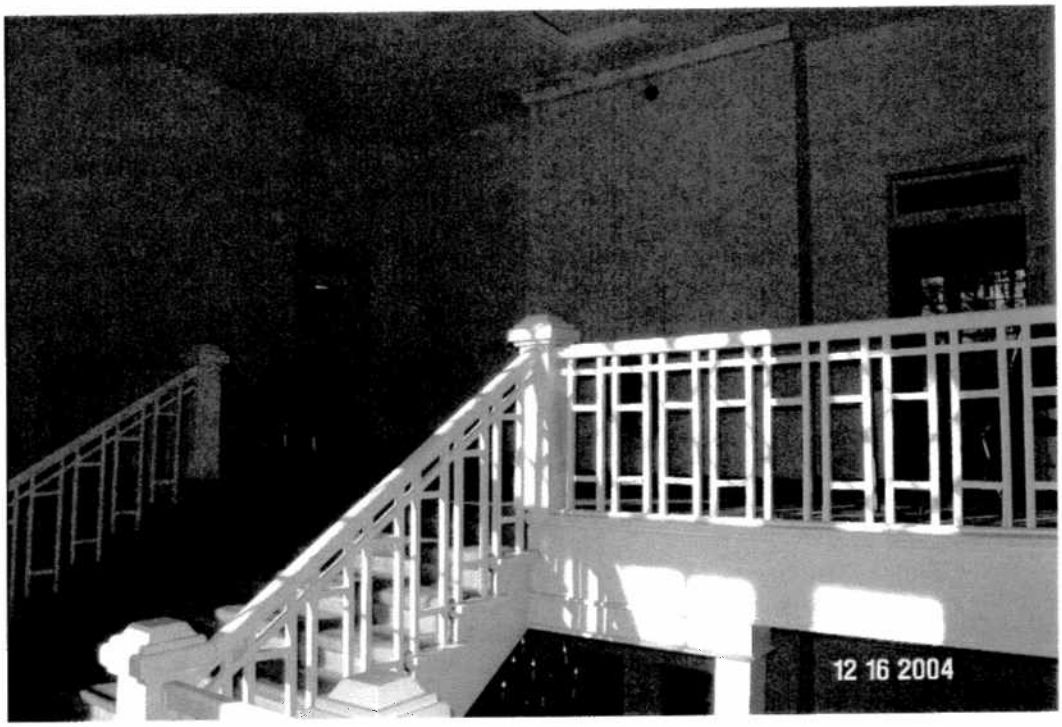



Photo 19. Repairs are needed on the main stair. Several elements of the railing are missing.

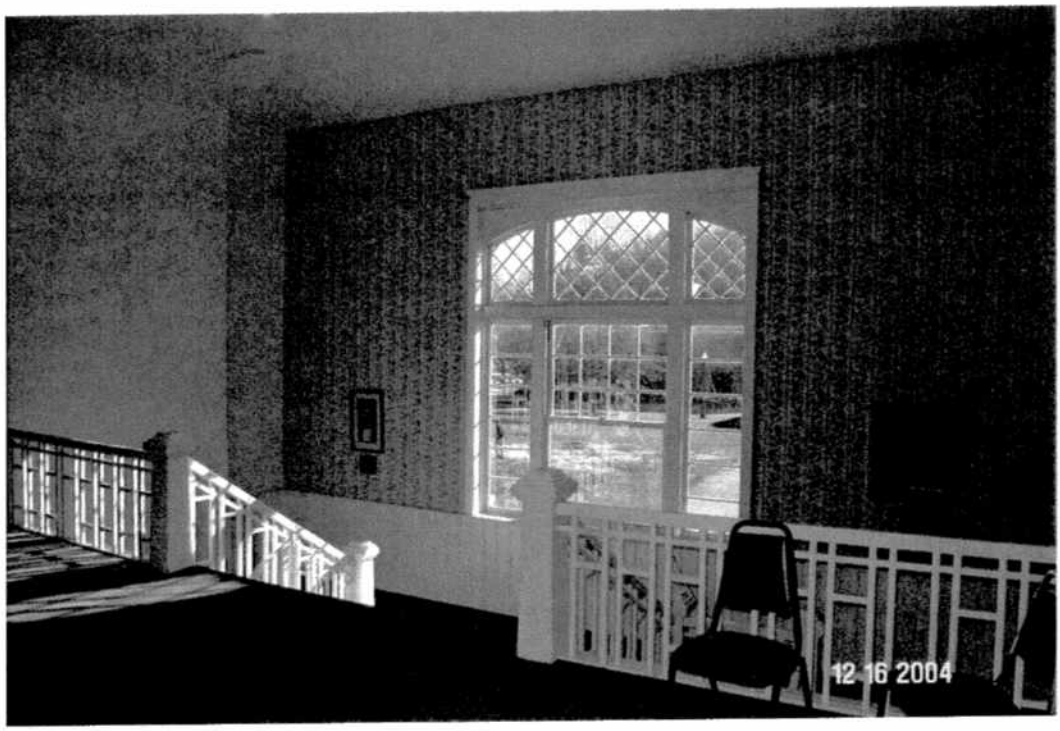
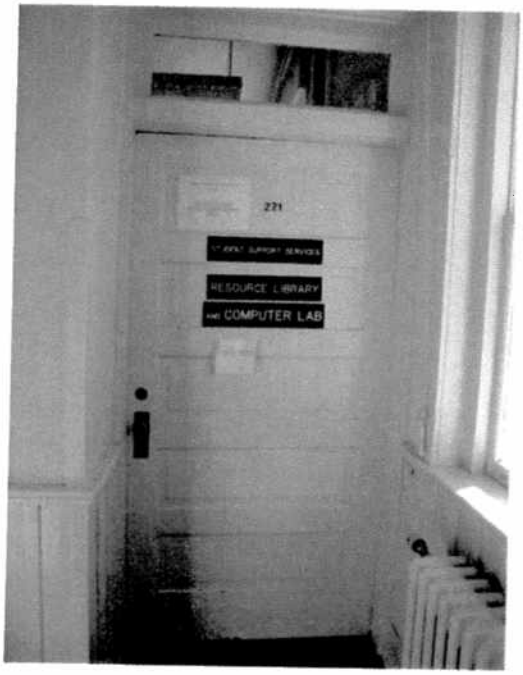



Photo 20. Main stair and window with a view of the Quadrangle.




Photos 21 and 22. First floor door (typical). Door, transom, and trim are original although the wood has been painted over original dark stain. Hardware has also been changed. Recommendations include restoring the original stain, opening the transom and replacing the hardware with new, period appropriate hardware. Signage could also be redone to be much more attractive and consistent.

Photo 23. Section of the original wood wainscot at the basement level, rear wing, NW corner. The wood is severely damaged due to wet conditions and possible termites. This area needs to be replaced.

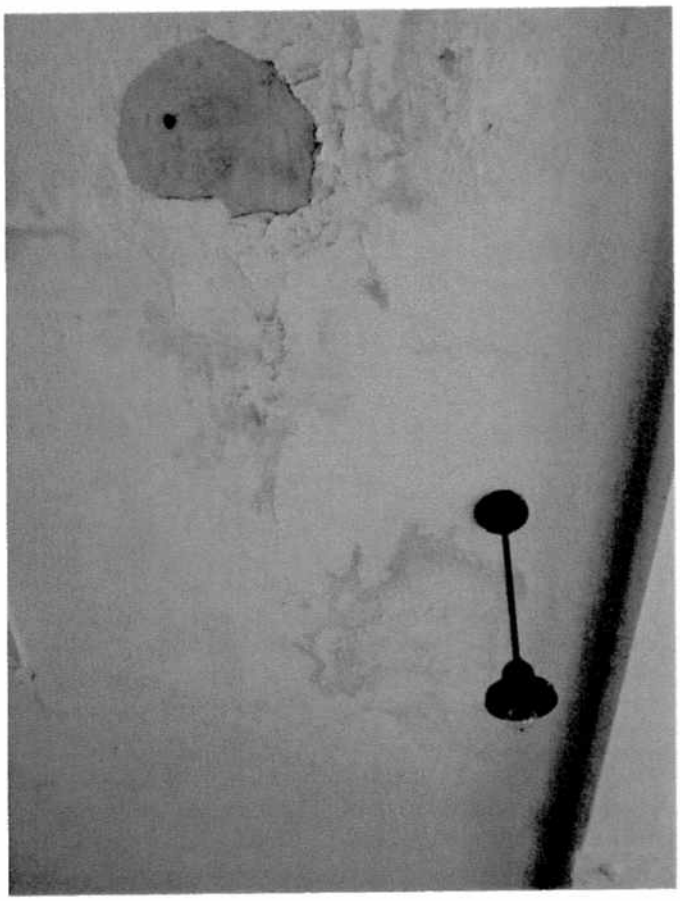


Photo 24. Damaged plaster due to roof or piping leaks.

Photo 25. Third floor ceiling over hall with attic access. Plaster ceiling has water damaged that needs repair.

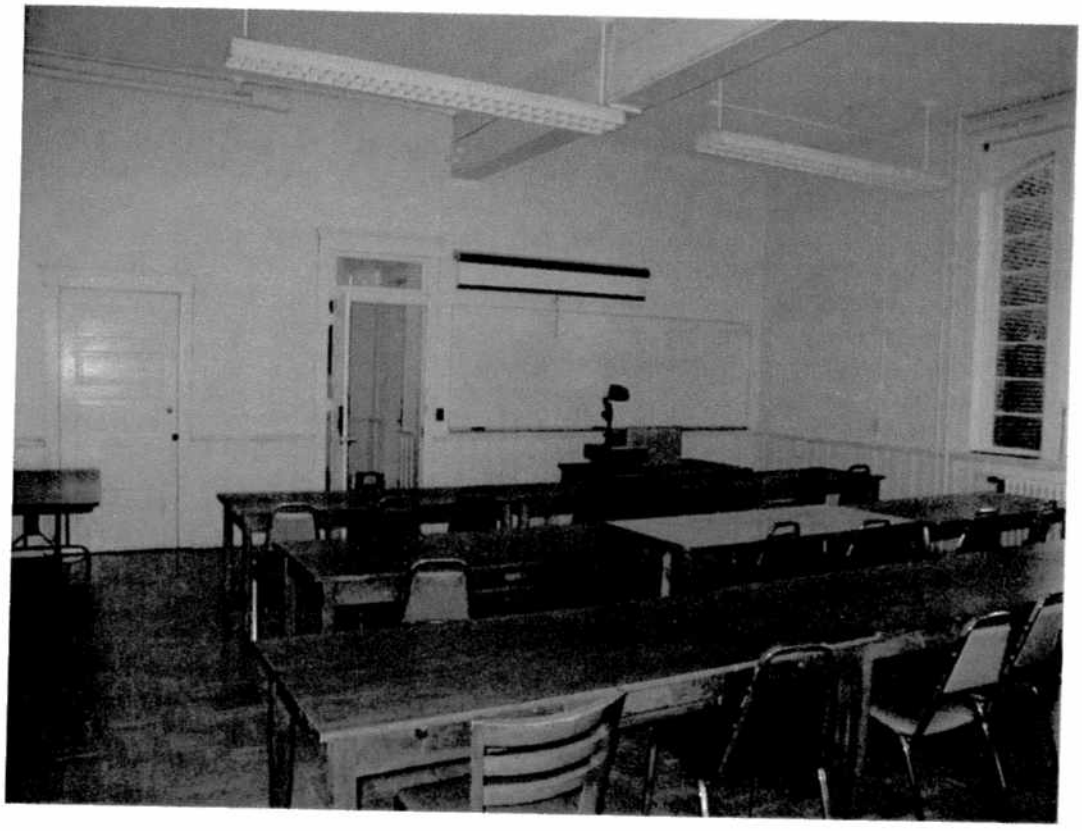


Photo 26. View of typical classroom, east room on the first floor. All wood trim has been painted and the original wood floor has been covered with vinyl tile.

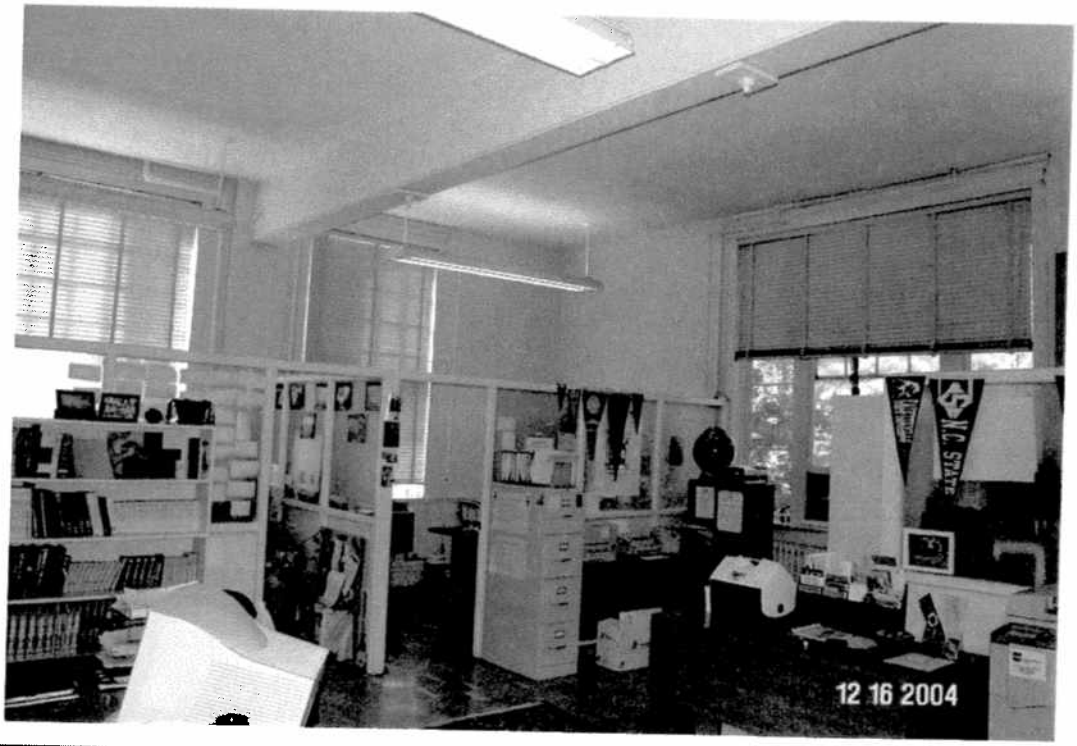



Photo 27. View of first floor offices, north wing.

Photo 28. Basement classroom, west wing.

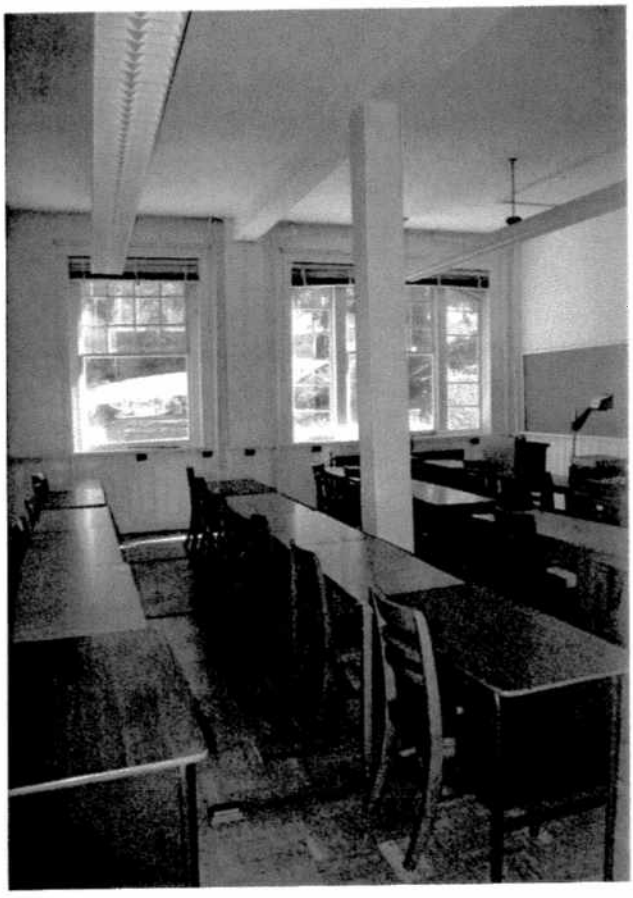


Photo 29. View of classroom, basement east wing. Electrical outlets have been surface mounted to the floor and are a tripping hazard and a current code violation.

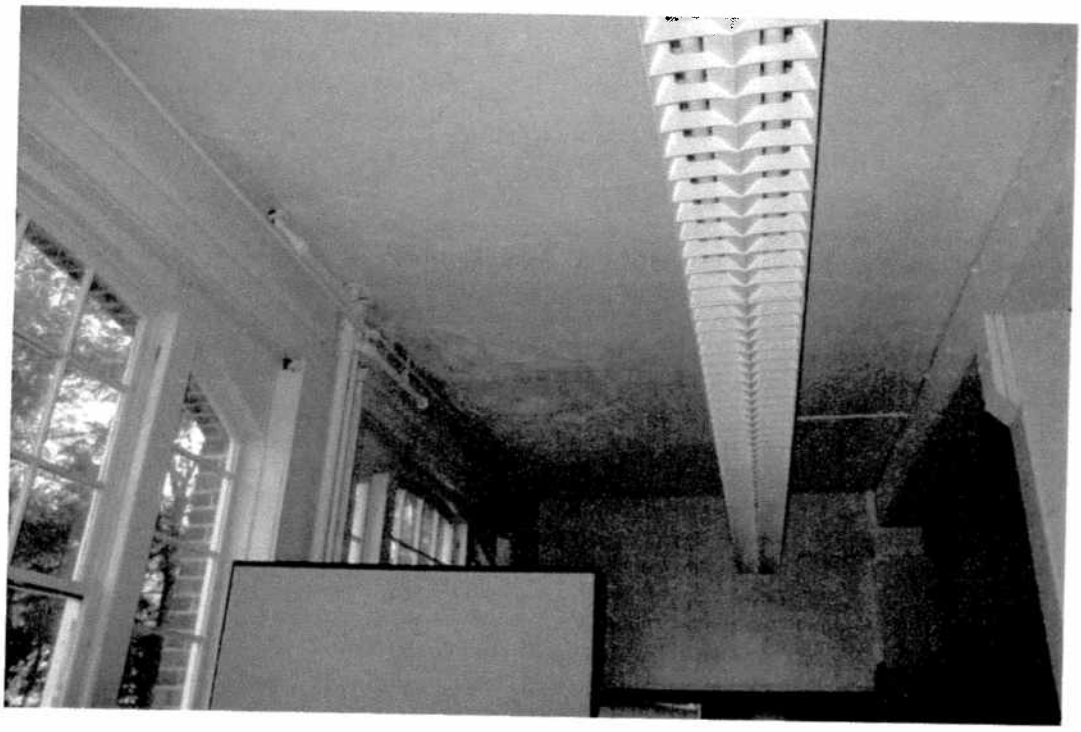


Photo 30. Basement room, north wing with damaged plaster on the ceiling.

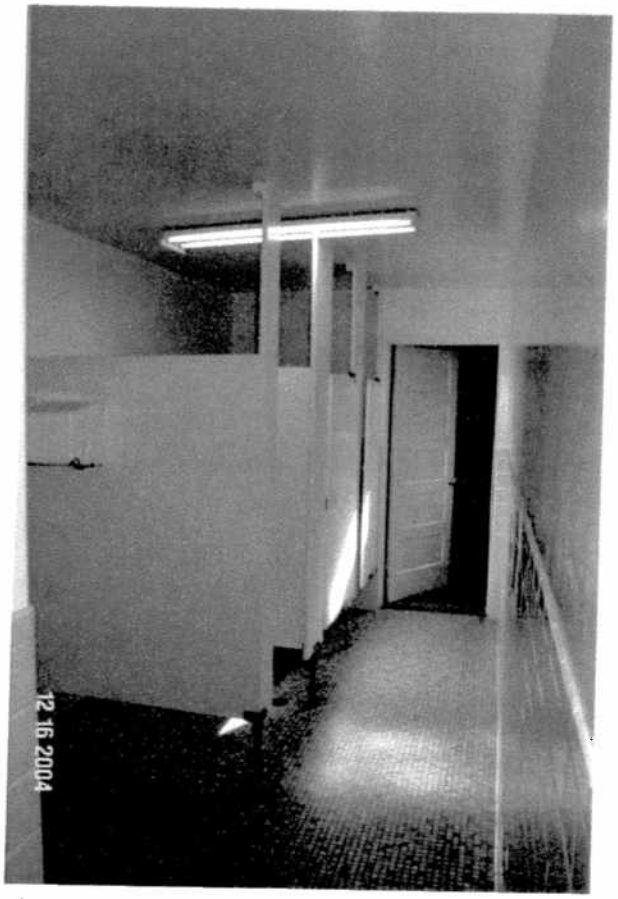



Photo 31. View of women's room in the basement. Facilities are outdated and do not meet current accessibility codes.

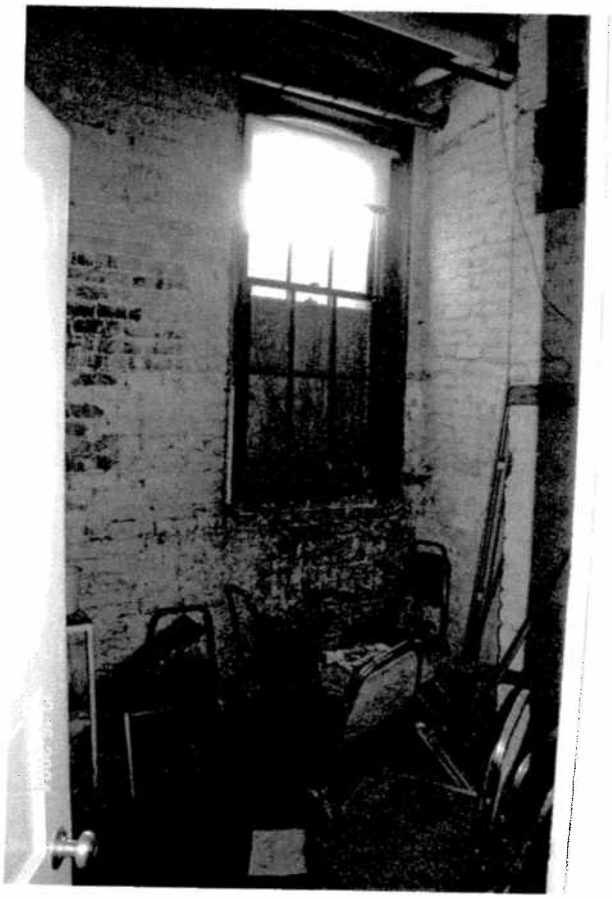


Photo 32. View of basement storage room.

Photo 33. Attic view of original heating ducts that were built into the walls. These have been abandoned for this purpose and are used now as chases.

Photo 34. View of attic looking east of original framing and vent beyond.

Photo 35. View of attic looking west.

**STRUCTURAL BUILDING ASSESSMENT**

A structural survey by an engineer was not included in the scope of work for this building. The building appears to be in good condition; however a thorough survey should be undertaken prior to any rehabilitation work.

**BUILDING SYSTEMS ASSESSMENT**

Survey and analysis of the building by an engineer was not included in the scope of work for this building. HVAC, electrical and plumbing systems will need to be upgraded to meet alterations in the building required by current code, such as additional toilet facilities and an elevator.

The building is currently heated by a steam radiator system that was installed in 1935 according to engineering drawings that survive (see *Images 10-13*). Steam is provided by a cast-iron, natural gas-fired boiler in the basement of McConnell Gymnasium. Additional information about this system is included in the Preservation Plan for McConnell Gymnasium. Air conditioning is provided by window units that are not efficient and detract from the appearance of the building.

**PROPOSED REHABILITATION**

It is anticipated that the current use of the building, with classrooms and offices, will remain, although there may be some departmental changes in the future. The biggest deficiencies in the building are due to current code compliance as the building was originally constructed with no toilet facilities and only one exit. The building also does not meet current standards for disabled access and a rehabilitation project should correct these issues, repair exterior and interior finishes and features, and install a new central HVAC system.

**BUILDING CODE ASSESSMENT**

Evaluation was done under the 2006 North Carolina Rehabilitation Code and assumed that the building would undergo a full rehabilitation project. The project would be defined as a "Reconstruction." Refer to the Introduction for definitions. The primary concern of code compliance for this building pertains to egress. The building was designed with only one stair and one exit, although a fire escape was added to the north side that is accessed through windows. In addition, the stair is constructed of wood and is not enclosed.

The 2006 North Carolina Rehabilitation Code allows the stair to remain, with the addition of a second stair that meets current code requirements. This stair must be constructed of non-combustible materials and enclosed with direct egress to the outside. It should also be located as far away from the existing exit as possible.

Complying with current accessibility and plumbing codes require an accessible main entrance and rest rooms on each floor. The existing ramp at the front of the building is too steep and the restrooms, which are not accessible, are all in the basement.

**Current and Proposed Uses**

Use Group B – Business (Offices and Education over grade 12)

**Construction Type**

Type 1-B: Exterior walls of non-combustible masonry; interior floor and roof structures of non-combustible concrete construction.

**Historic Certification Provisions**

Building is eligible for National Register Listing as contributing to the Mars Hill Historic District. Listing on the National Register allows for special provisions under NC Rehabilitation Code Section 1.33 – Historic Buildings.

**Code Provisions**

The following assessment of requirements refers to the NC Rehabilitation Code Section 1.17 (Use Group B and 1.33 (Historic Buildings). This list includes the primary requirements; the code should be reviewed for additional items.

1. Exits: Two exits required from all stories with less than 500 occupants. (§1.17a)
   - Fire escapes are allowed, but must be accessible through a doorway (not a window) and be freely accessible (not through an occupied space). Existing fire escape is not acceptable. (§1.17a1)
2. Means of Egress Lighting: Artificial lighting with intensity not less than one foot candle at the floor with emergency back-up. (§1.17e)
3. Illuminated Exit Signs: Required with emergency backup. (§1.17f)
4. Plumbing requirements. (§1.17k) Refers to NC Plumbing Code, table 403.1 (revised July 1, 2006).
   - Women: four toilets and three lavatories.
   - Men: three toilets, one urinal, and three lavatories.
   - Drinking Fountain: one, Accessibility requires one low and one high.
5. Interior finishes shall comply with requirements of §1.11c for flame spread. (§1.17m)
6. Manual Fire Alarm: Required if the entire building is rehabilitated. (§1.17Aa)

## PROPOSED SCOPE OF WORK

### Demolition/Removal
- Fire Escape
- Ramp and steps to front porch
- Restrooms

### Site
- Replace front steps in concrete to match original as much as possible, although grade has been lowered
- Install new accessible ramp to meet code

### Exterior
- Clean, repair, and repoint deteriorated brick
- Restore wood windows, prep, and paint
- Install operational interior storm windows
- Restore wood doors
- Repair wood trim and eaves, prep and paint
- Replace gutters, downspouts, and underground drains to daylight or storm sewer
- Construct new exit stair

### Interior
- Repair plaster walls and ceilings, prep, and paint
- Repair wood trim, windows, doors, and transoms, prep and paint
- Repair, prep and paint wood stair
- Replace and/or refinish floors as desired. Some carpet has been replaced in the last year. Refinishing original wood floors would fit the historic character of the building, but may not be practical
- Install elevator with overhead fire screen
- Renovate basement restrooms and add one additional accessible toilet room on each of the first and second floors. Signage will be required on the basement restrooms indicating that accessible facilities on the upper floors

### Building Systems
- HVAC – complete new systems
- Electrical – upgrades as needed including wiring, fixtures, and communications
- Plumbing – new system with new toilet rooms
- Fire Protection – fire alarm and smoke detectors

## COST ESTIMATE

Based upon current market information, a statement of probable costs follows. Unit price figures are obtained from R. S. Means, 1st quarter 2006. Square foot costs for plumbing, mechanical and electrical systems are provided by Reece, Noland & McErath, Inc. These costs do not include asbestos abatement or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead & Profit |
|---|---|---|---|---|---|
| **01 General Conditions** | Construction facilities, temporary equipment, administration, regulatory requirements | | | 10% | $64,100.75 |
| **02 Existing Conditions** | Demolition of concrete slab on grade | 58 | C.F. | 5.00 | $290.00 |
| | Cut out of 12" thick brick masonry for new openings | 84 | S.F. | 37.25 | $3,129.00 |
| | Demolition of existing interior partitions | 1,044 | S.F. | 0.30 | $313.20 |
| | Demolition of existing steel fire escape | 2 | Flight | 700.00 | $1,400.00 |
| | Excavating trench at foundation by hand | 300 | C.Y. | 21.50 | $6,450.00 |
| | Lead paint removal at cornice and soffit | 880 | S.F. | 5.45 | $4,796.00 |
| | Lead paint removal/prep multi-light windows | 2,172 | S.F. | 18.00 | $39,096.00 |
| **03 Concrete** | Concrete footing at masonry walls | 48 | L.F. | 21.50 | $1,032.00 |
| | Concrete ramp and landings | 312 | S.F. | 12.30 | $3,837.60 |
| | Stairs - concrete exit | 2 | Flight | 3,842.00 | $7,684.00 |
| **04 Masonry** | Masonry - point existing (30% @ 7 bricks/S.F.) | 2,865 | S.F. | 19.20 | $55,008.00 |
| | Masonry - clean existing | 9,549 | S.F. | 1.10 | $10,503.90 |
| | Masonry - replaced damaged brick (5% @ 7 bricks/S.F) | 478 | S.F. | 30.00 | $14,340.00 |
| **05 Metals** | Railing at stairs, ramps | 170 | L.F. | 34.50 | $5,865.00 |
| | Metal stud partitions - 6" @ 16" o.c., 12' high | 1,258 | S.F. | 2.65 | $3,333.70 |
| **06 Wood** | Wood framing - 2x4 studs @ 16" o.c., 12' high | 400 | S.F. | 1.05 | $420.00 |
| | Wood framing - roof over stair | 200 | S.F. | 12.05 | $2,410.00 |
| **07 Thermal & Moisture Protection** | Foundation drainage | 195 | L.F. | 7.45 | $1,452.75 |
| | Foundation waterproofing | 1,389 | S.F. | 0.85 | $1,180.65 |
| | Roof drainage - repair/replace gutters, down-spouts | 267 | L.F. | 3.80 | $1,014.60 |
| **08 Openings** | Doors - new interior doors | 7 | Ea. | 363.20 | $2,542.40 |
| | Doors - new interior fire-rated doors | 3 | Ea. | 774.50 | $2,323.50 |
| | Fire screen - roll down at elevator | 3 | Ea. | 1,550.00 | $4,650.00 |
| | Doors - restore existing exterior doors | 4 | Ea. | 790.00 | $3,160.00 |
| | Doors - restore existing interior doors | 39 | Ea. | 113.00 | $4,407.00 |
| | Doors - install bronze weatherstripping at exterior doors | 4 | Ea. | 63.00 | $252.00 |
| | Doors - new door hardware to meet ADA | 15 | Ea. | 138.80 | $2,082.00 |
| | Windows - fire rated glazing at exit stair | 189 | S.F. | 19.50 | $3,685.50 |
| | Windows - storm windows, interior magnetic | 2,172 | S.F. | 6.40 | $13,900.80 |

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead & Profit |
|---|---|---|---|---|---|
| **09 Finishes** | Carpet | 466 | S.Y. | 45.65 | $21,272.90 |
| | Exterior painting - soffit & trim | 880 | S.F. | 1.90 | $1,672.00 |
| | Exterior painting - doors | 4 | Ea. | 52.25 | $209.00 |
| | Exterior painting - multi-light windows | 2,172 | S.F. | 3.70 | $8,036.40 |
| | Gypsum board finish on new walls and ceilings | 3,495 | S.F. | 4.25 | $14,853.75 |
| | Interior painting - ceilings | 10,725 | S.F. | 0.65 | $6,971.25 |
| | Interior painting - walls | 12,440 | S.F. | 0.55 | $6,842.00 |
| | Interior painting - balustrade, trim | 180 | S.F. | 1.23 | $221.40 |
| | Plaster restore | 5,000 | S.F. | 2.05 | $10,250.00 |
| | Wood flooring - sanding & finishing | 4,725 | S.F. | 1.45 | $6,851.25 |
| **10 Specialties** | Grab bars to meet ADA | 4 | Ea. | 85.50 | $342.00 |
| **14 Conveying Equipment** | Elevator, hydraulic, 2500 lb passenger, 3 floors | 1 | Ea. | 63,320.00 | $63,320.00 |
| **22 Plumbing** | Add/relocate plumbing fixtures per plans | 10 | Ea. | 1,375.00 | $13,750.00 |
| **23 HVAC** | Rework/replace piping, new boiler, new DX units | 8,961 | S.F. | 18.70 | $167,570.70 |
| **26 Electrical** | Install new electrical wiring, lighting fixtures | 8,961 | S.F. | 13.20 | $118,285.20 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | | | **$705,108.00** |
| | Architectural & Engineering Fees | | | 9% | $ 63,460.00 |
| | Contingency | | | 20% | $141,022.00 |
| **TOTAL ESTIMATED COST** | | 8,961 | S.F. | $101.50 | **$909,590.00** |

## Notes

[1] McLeod, John Angus. *From These Stones, Mars Hill College 1856-1967*. p. 213

EXISTING
BASEMENT PLAN
SCALE: 3/32" = 1'-0"

N

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# McCONNELL GYMNASIUM

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
BASEMENT
PLAN

EXISTING
GROUND FLOOR PLAN
SCALE: 3/32" = 1'-0"

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# McCONNELL GYMNASIUM

PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING GROUND FLOOR PLAN

EXISTING
FIRST FLOOR PLAN
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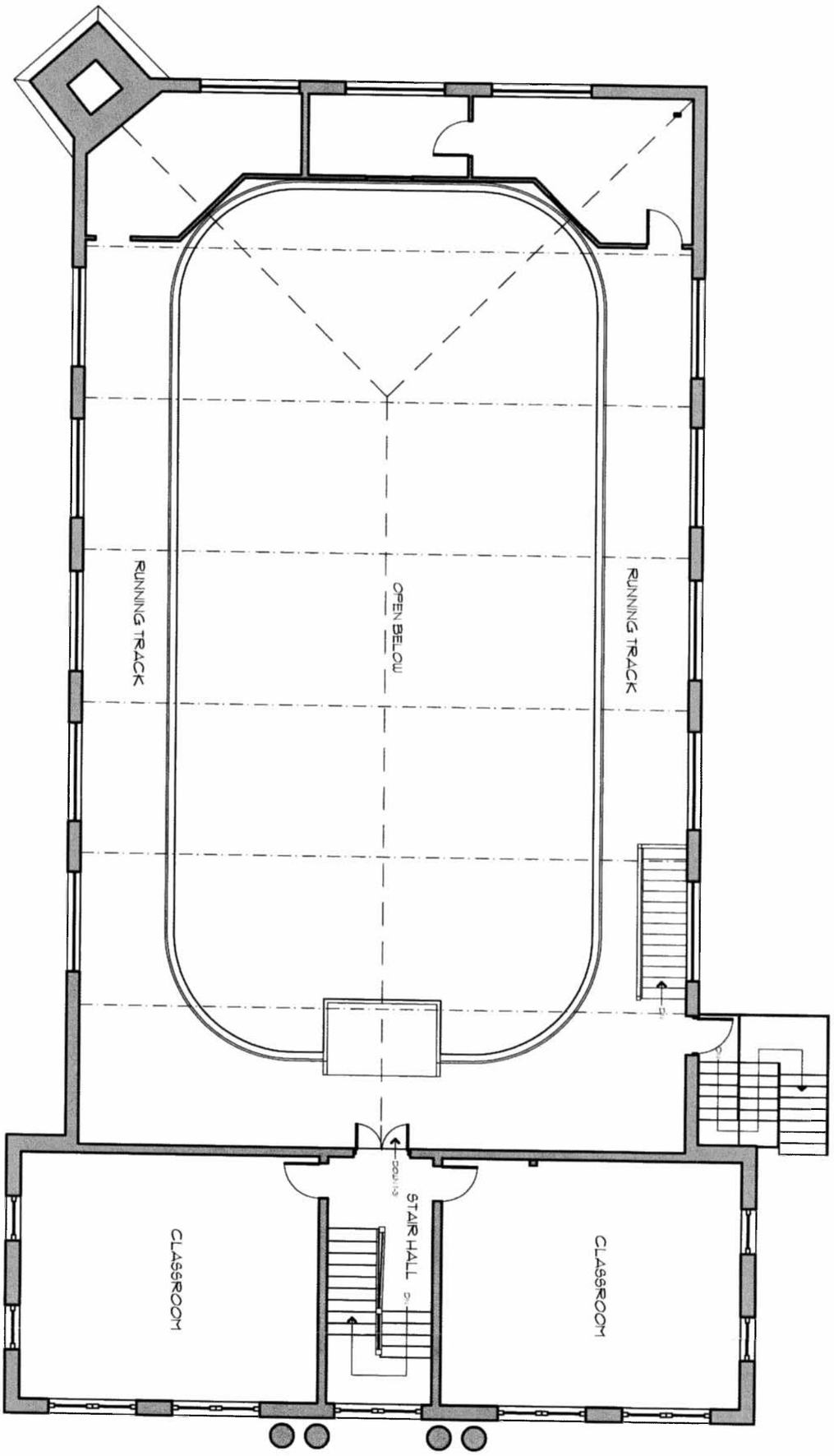
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
FIRST
FLOOR
PLAN




EXISTING
SECOND FLOOR PLAN
SCALE: 3/32"= 1'-0"

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# McCONNELL GYMNASIUM

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING SECOND FLOOR PLAN

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PROPOSED BASEMENT PLAN

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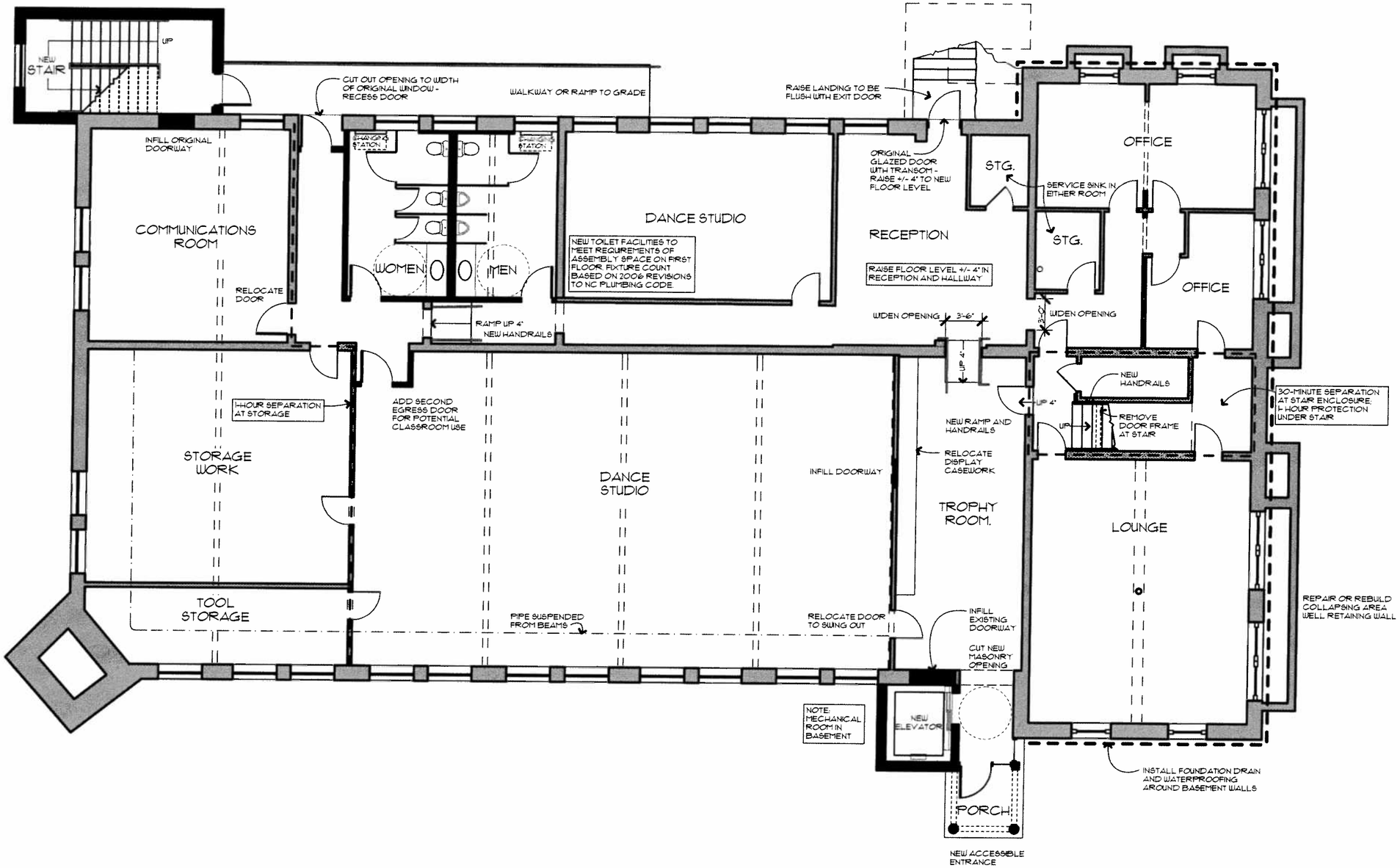
## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED BASEMENT PLAN




# PROPOSED GROUND FLOOR PLAN

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PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED GROUND FLOOR PLAN

# PROPOSED FIRST FLOOR PLAN

SCALE: 3/32"= 1'-0"

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## McCONNELL GYMNASIUM

PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED FIRST FLOOR PLAN

EXISTING FIRE ESCAPE TO REMAIN
AREA OF RESCUE ASSISTANCE
NEW STAIR
DN
REPAIR ROOF STRUCTURE AND REMOVE TEMPORARY SUPPORT
BALCONY
1556 NSF
REMOVE EXISTING NON-COMPLIANT STAIR - PATCH FLOOR TO MATCH
REPAIR DAMAGED ROOF STRUCTURE & SHEATHING THIS AREA
CLASSROOM
ADD SUPPLEMENTARY GUARD BEHIND EXISTING RAILING; GUARD TO BE MIN. 42" IN HEIGHT WITH BALUSTERS MAX 4" SPACING
UP
REPAIR DAMAGED CEILING PLASTER THIS AREA
REMOVE ALL PARTITIONS THIS AREA
OPEN BELOW
LIGHTING BOOTH TO REMAIN
STAIR HALL
DN
ORIGINAL DOORS TO BE FIXED IN OPEN POSITION
REPAIR AND SECURE LOOSE STAIR BALUSTRADE
NEW HANDRAILS BOTH SIDES OF STAIR
FIXED GLASS - FLOOR TO CEILING
LOBBY
AT CLASSROOM FLOOR LEVEL. CEILING ABOVE
30-MINUTE FIRE RATING ON WALL & OPENINGS
TOP OF NEW WALLS AT BOTTOM OF TRUSS
REPAIR DAMAGED CEILING PLASTER THIS AREA
AREA OF RESCUE ASSISTANCE
CLASSROOM
BALCONY
RAMP UP 1-3"
CUT NEW MASONRY OPENING
NEW ELEVATOR
FLOOR TO CEILING WINDOW
ROOF BELOW

# PROPOSED SECOND FLOOR PLAN

SCALE: 3/32"= 1'-0"

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GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

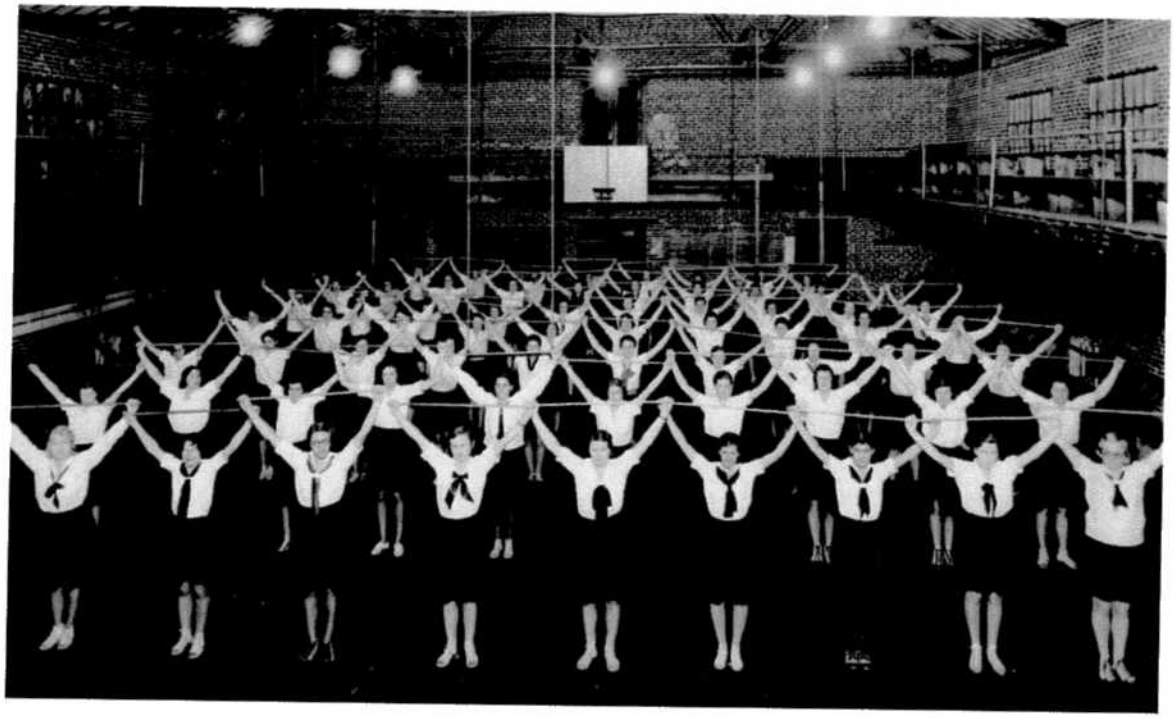
PROPOSED SECOND FLOOR PLAN

# McCONNELL GYMNASIUM

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

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# McCONNELL GYMNASIUM

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

### GENERAL INFORMATION

| | |
|---|---|
| **Year Built** | Constructed 1924. Swimming pool added in basement in late 1920's. |
| **Style** | Classical Revival |
| **Architect** | Richard Sharp Smith, Smith & Carrier, Asheville, NC |
| **Builder** | Unknown |
| **Original Use** | Classrooms; Offices; Gymnasium |
| **Current Use** | Offices; Student Activity Center; Dance Studio; Classrooms |
| **Proposed Use** | Classrooms and Offices in front wing (Ground, 2nd & 3rd Floors); Student Activity Center in former gymnasium; Dance Studio on ground Floor |

**Building Area**

| | | |
|---|---|---|
| Basement: | 1,144 SF | |
| Ground Floor: | 6,389 SF | |
| First Floor: | 1,492 SF | (Classroom Wing) |
| | 4,897 SF | (Gymnasium) |
| Second Floor: | 1,492 SF | (Classroom Wing) |
| | 2,342 SF | (Gymnasium) |
| Total: | 17,756 SF | |

### HISTORIC SIGNIFICANCE

The major donor for the building was W. C. McConnell of Asheville. He selected the architectural firm of Smith & Carrier of Asheville.

The English architect Richard Sharp Smith (1852-1924) had been sent to Asheville in 1890 by architect Richard Morris Hunt to be the on-site supervising architect for the construction of the Biltmore House. Smith remained in Asheville after completion of the house in 1895 and developed a practice which had significant influence on the architectural development of Asheville in the late 19th and early 20th century.

### HISTORIC CERTIFICATION

Contributing building within the proposed Mars Hill College Historic District, National Register of Historic Places.

### ARCHITECTURAL SIGNIFICANCE

**Architectural Significance**

Although the front and rear wings of the building are contemporaneous, they have little in common architecturally, save for the use of common red brick and hipped roofs. The front classroom wing is a rigidly symmetrical Classical Revival design with a classical portico, wood double-hung windows, and boxed soffits. In contrast, the rear gymnasium wing is industrial in character, with steel windows and exposed rafters. Through the overall proportions, rooflines and rhythm of the windows, Smith managed to connect the two disparate wings into a cohesive design.

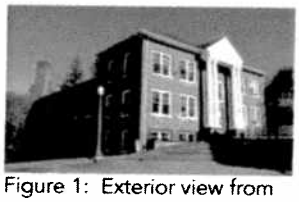


Figure 1: Exterior view from southwest.

**Exterior Features**
- Building massing and proportions
- Front portico
- Original wood entry doors and double-hung windows
- Original steel industrial windows
- Brick chimney

**Interior Features**
- Original floor plan with unaltered 2nd Floor Classrooms
- Main stair and balustrade
- Gymnasium with exposed steel trusses and suspended running track

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These have been placed in chronological order. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available.

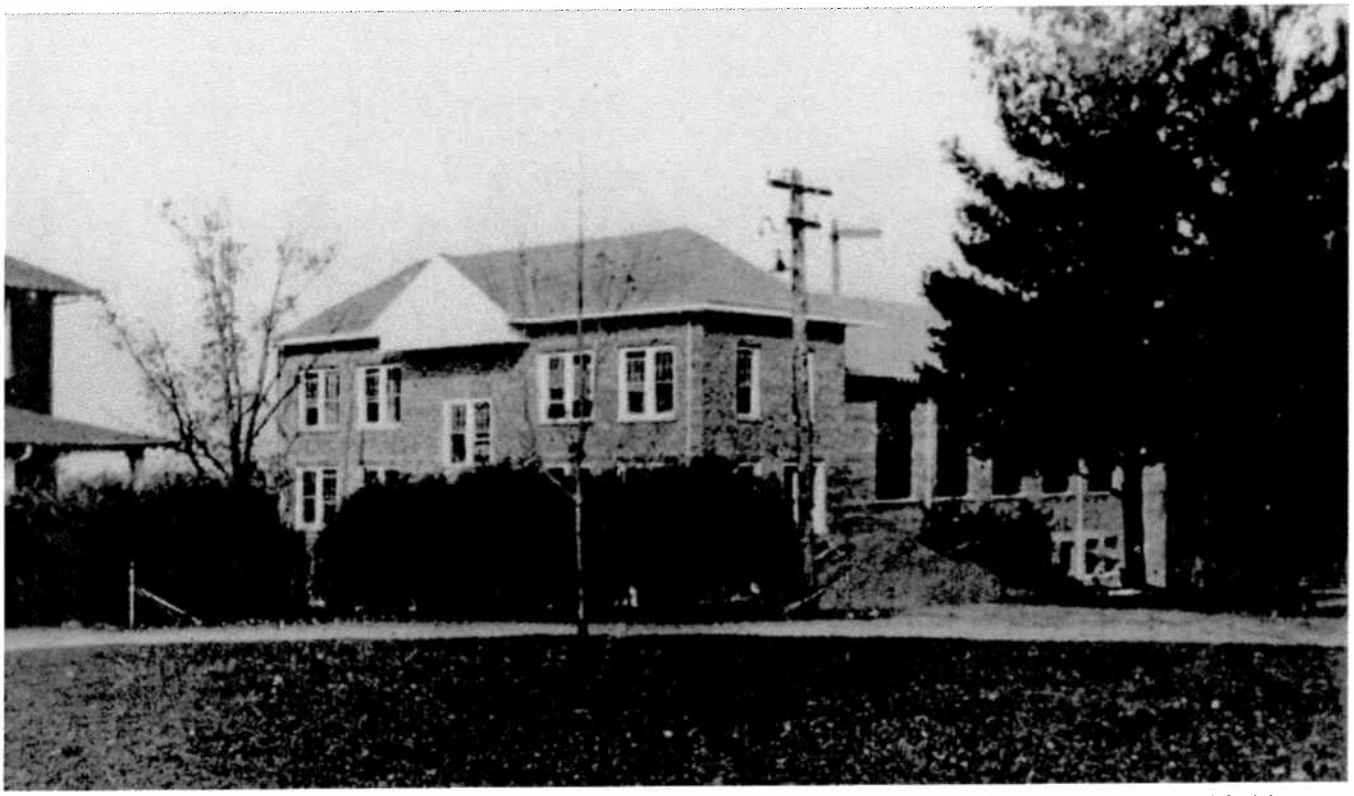


Image 1. McConnell Gymnasium under construction, circa 1924. *(MHC Quarterly, Vol. XXI, No. 3, p. 52, May 1925)*

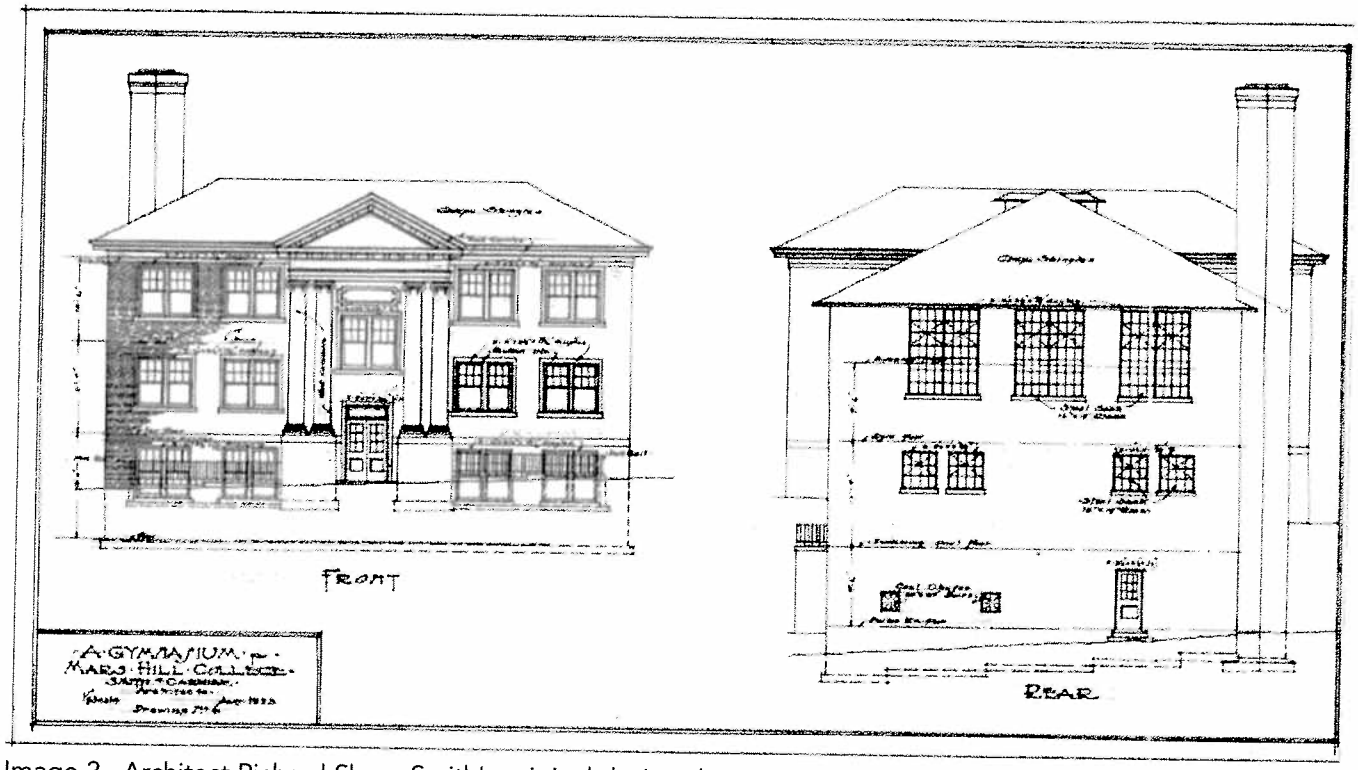



Image 2. Architect Richard Sharp Smith's original design drawings. Note changes in design of entrance portico and chimney as constructed. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

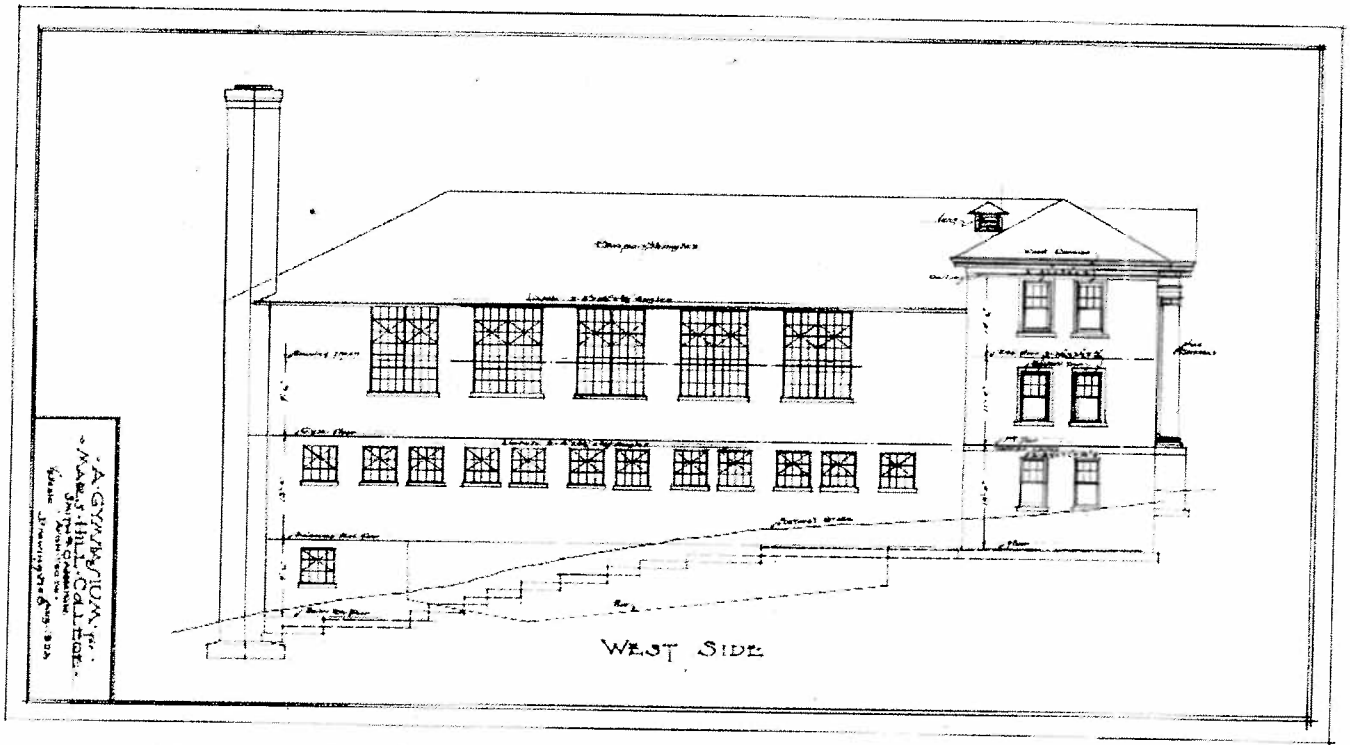



Image 3. Architect's original drawing for west elevation. Note changes in design for chimney as constructed. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

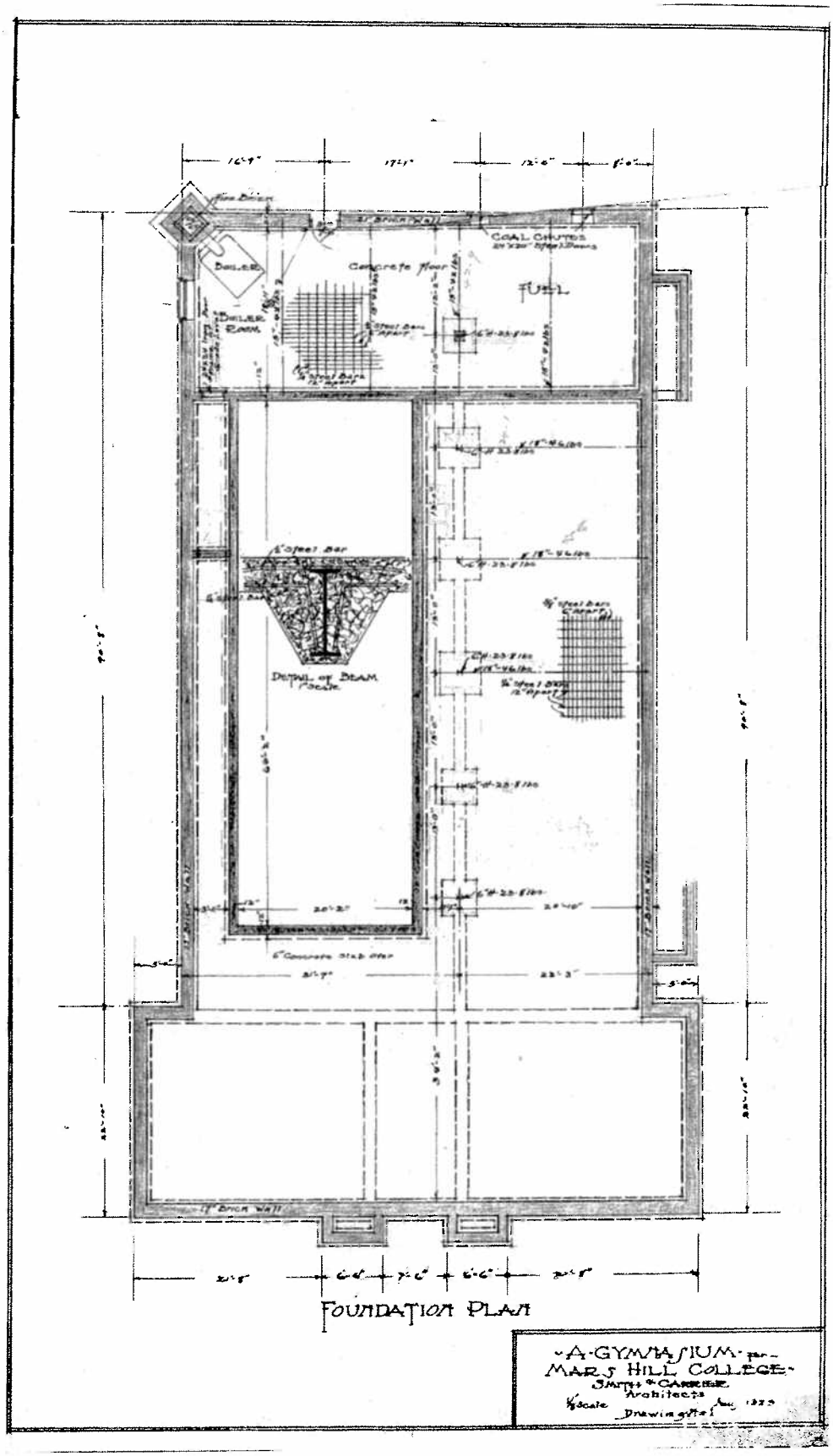



Image 4. Architects' original drawing of Basement & Foundation Plan. Pool foundation is shown on plans, although the pool was not constructed until several years after the building was finished. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

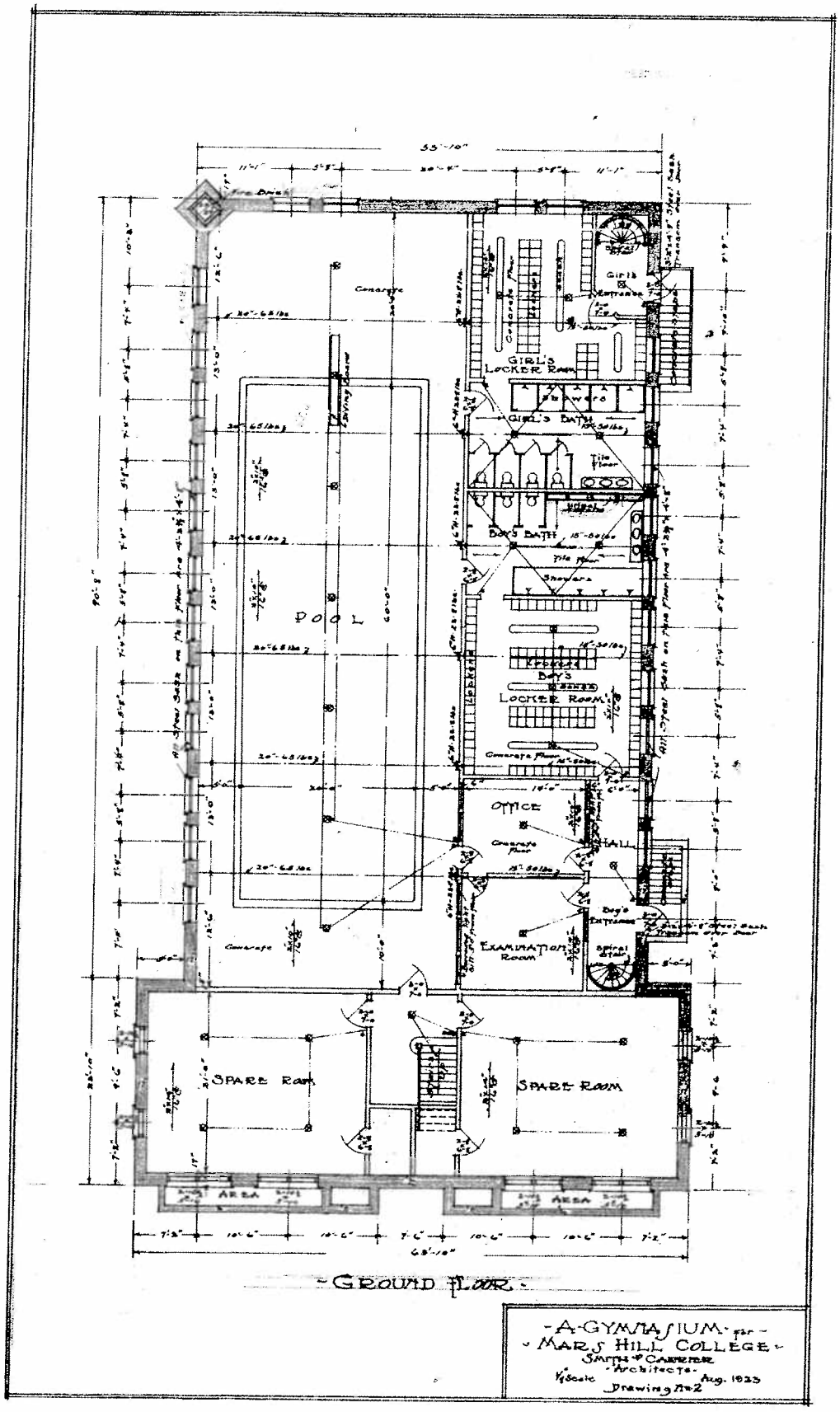



Image 5. Architect's original drawing for Ground Floor Plan. Note connection of locker rooms to gymnasium on upper floor via separate spiral stairs, all of which have been removed. The pool has been floored over. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

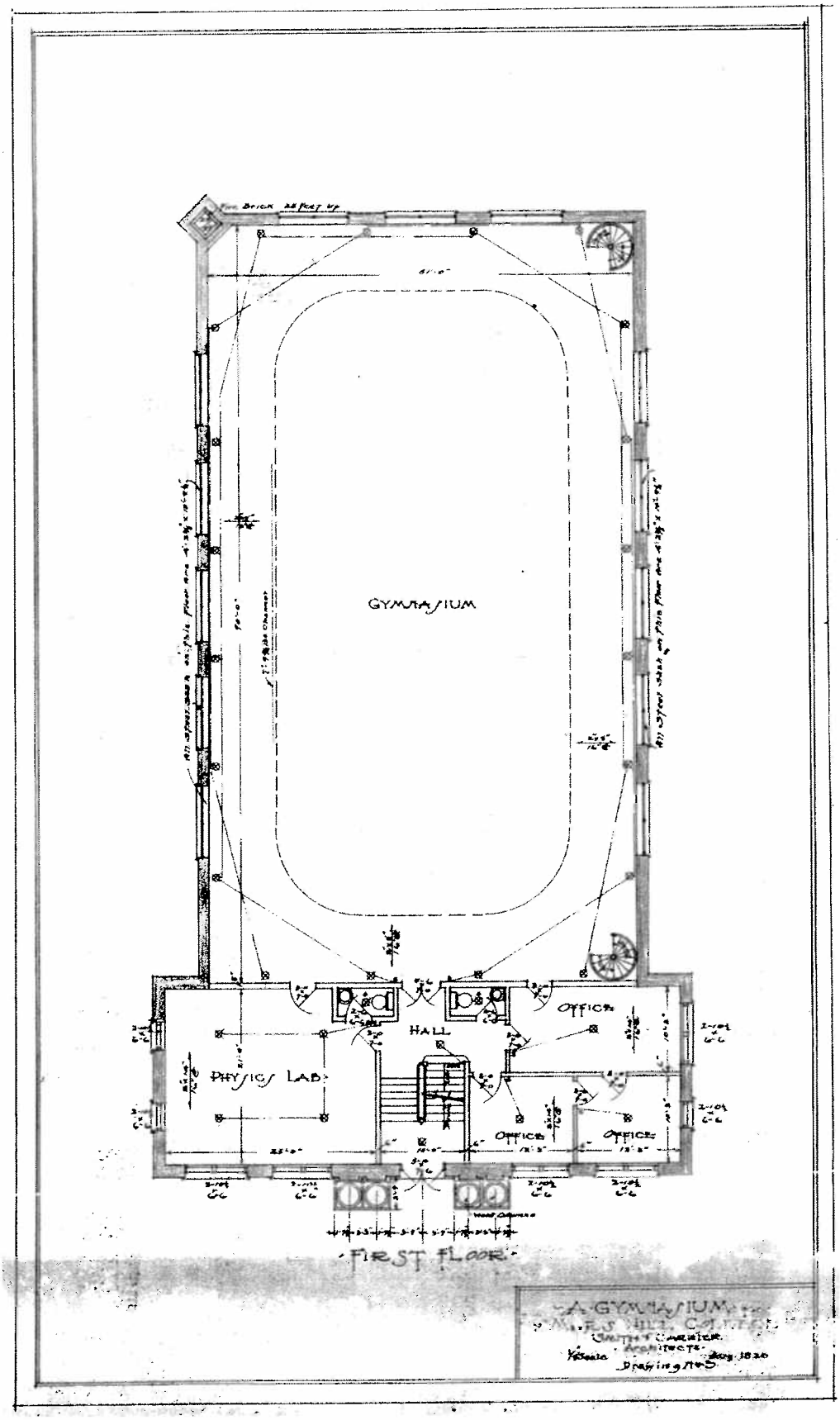



Image 6. Architect's original drawing of First Floor Plan. Note original design of main stairway, location of spiral stairs. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

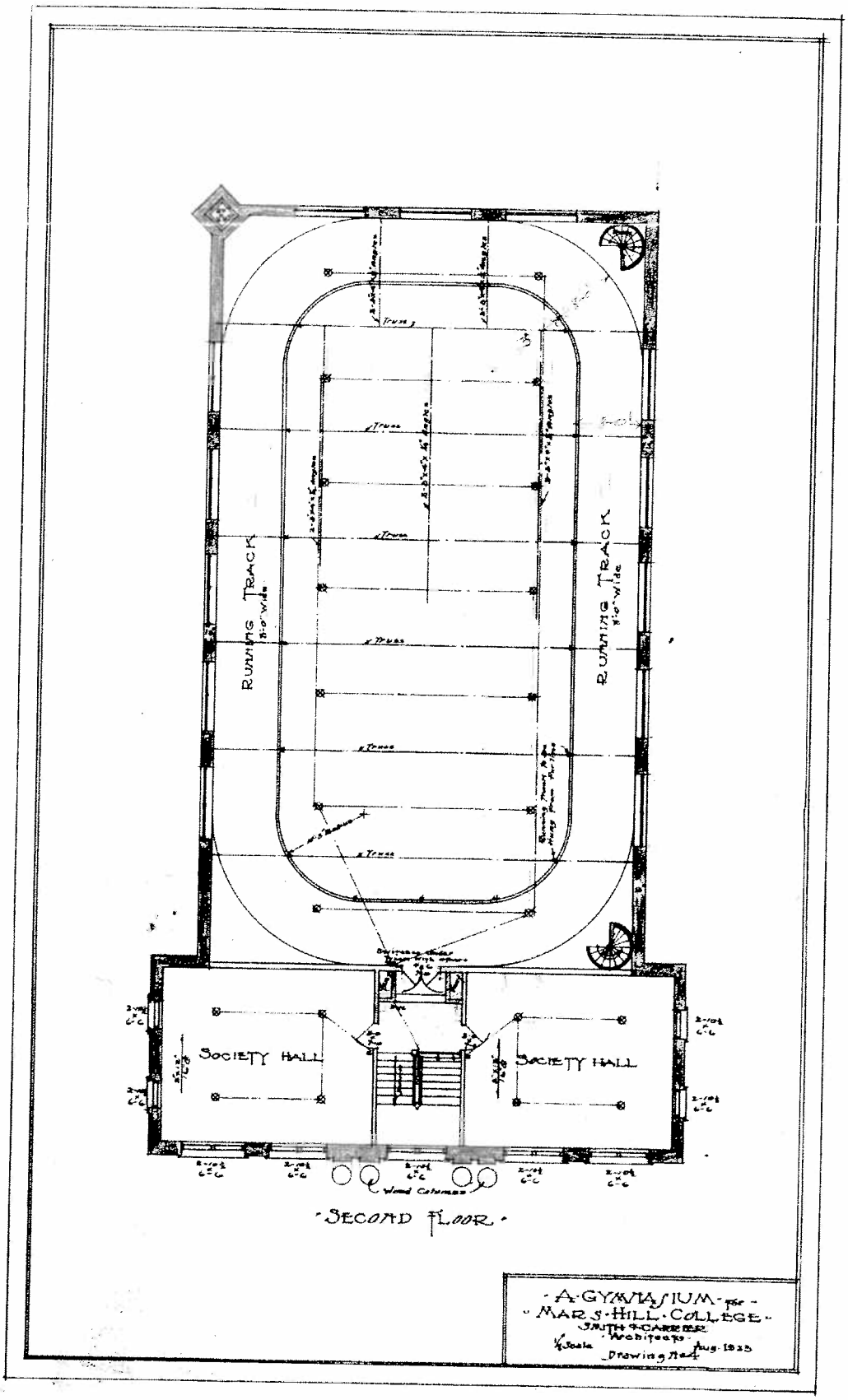



Image 7. Architect's original drawing for Second Floor Plan. Plans indicate that a banked running track was intended. Joist pockets above the track along the exterior wall suggest that the track structure may have been intended to be set at a higher elevation, but was relocated during construction. Note also the vent shafts for the bathrooms that were apparently never constructed. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

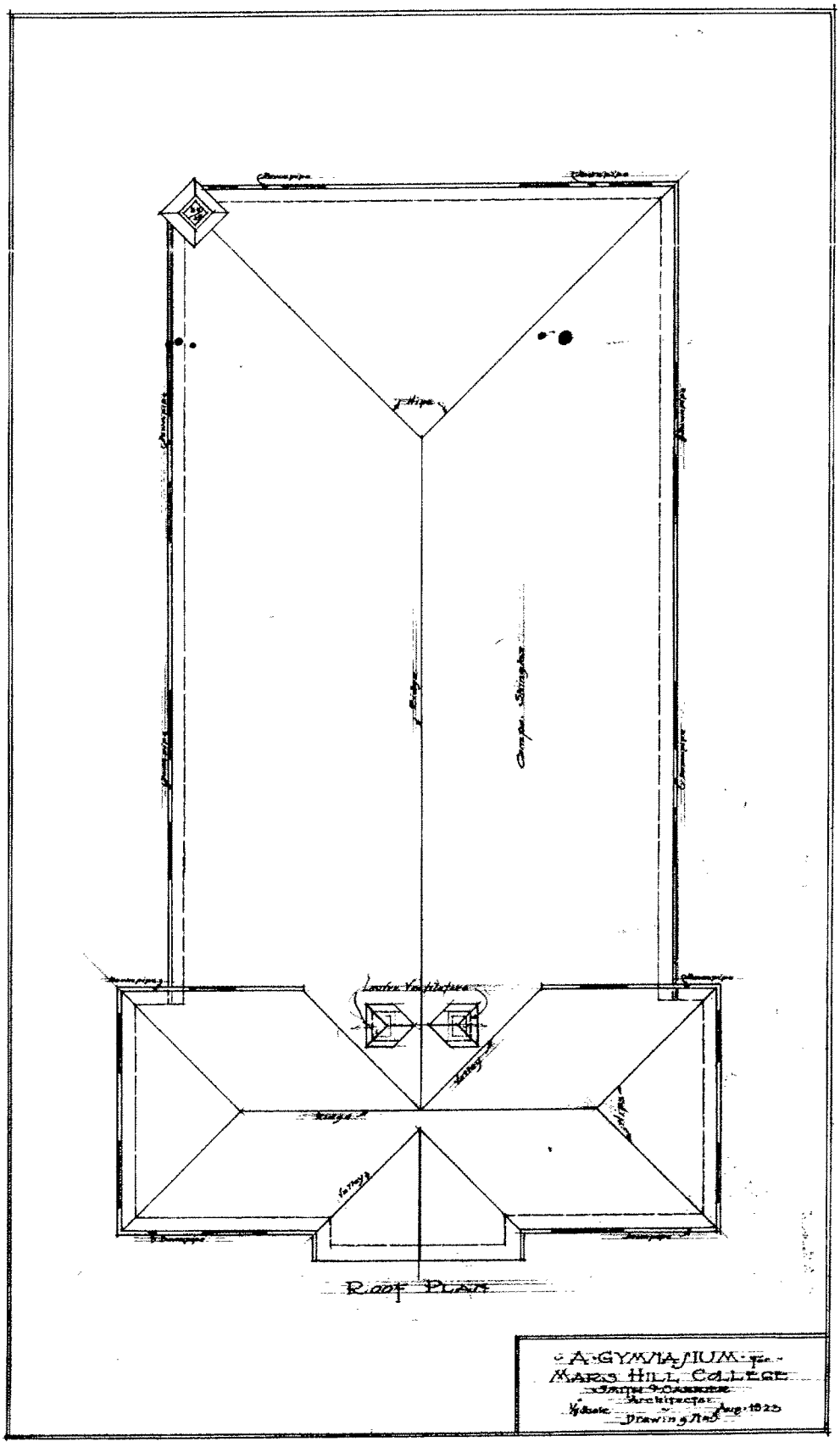



Image 8. Architect's original drawing for Roof Plan. Note the dormers with louvered ventilators for the bathrooms, which were apparently never constructed. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

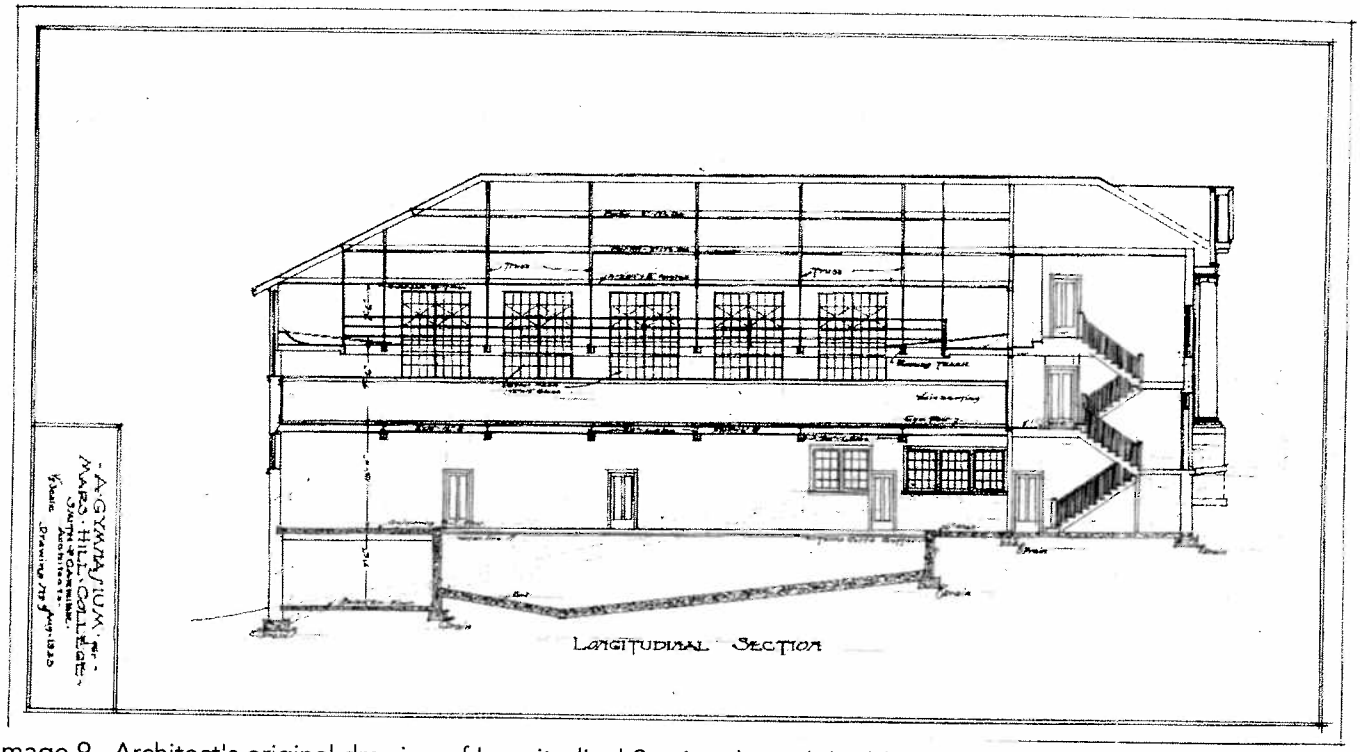



Image 9. Architect's original drawing of Longitudinal Section through building. Note indication of banked track. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

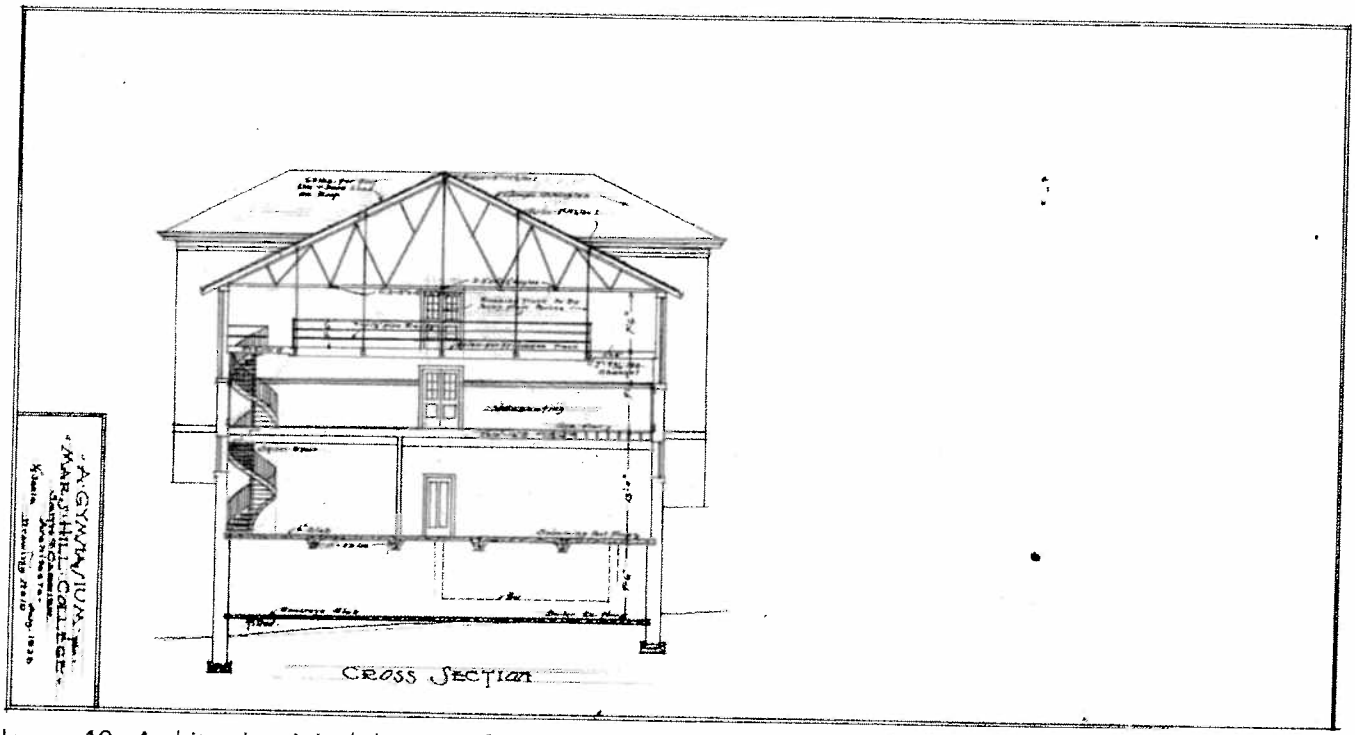



Image 10. Architect's original drawing of Cross Section through building. *(Historic Resources Commission of Asheville-Buncombe County, copy at MHC)*

Image 11. View of McConnell Gymnasium from quad, circa 1920's.

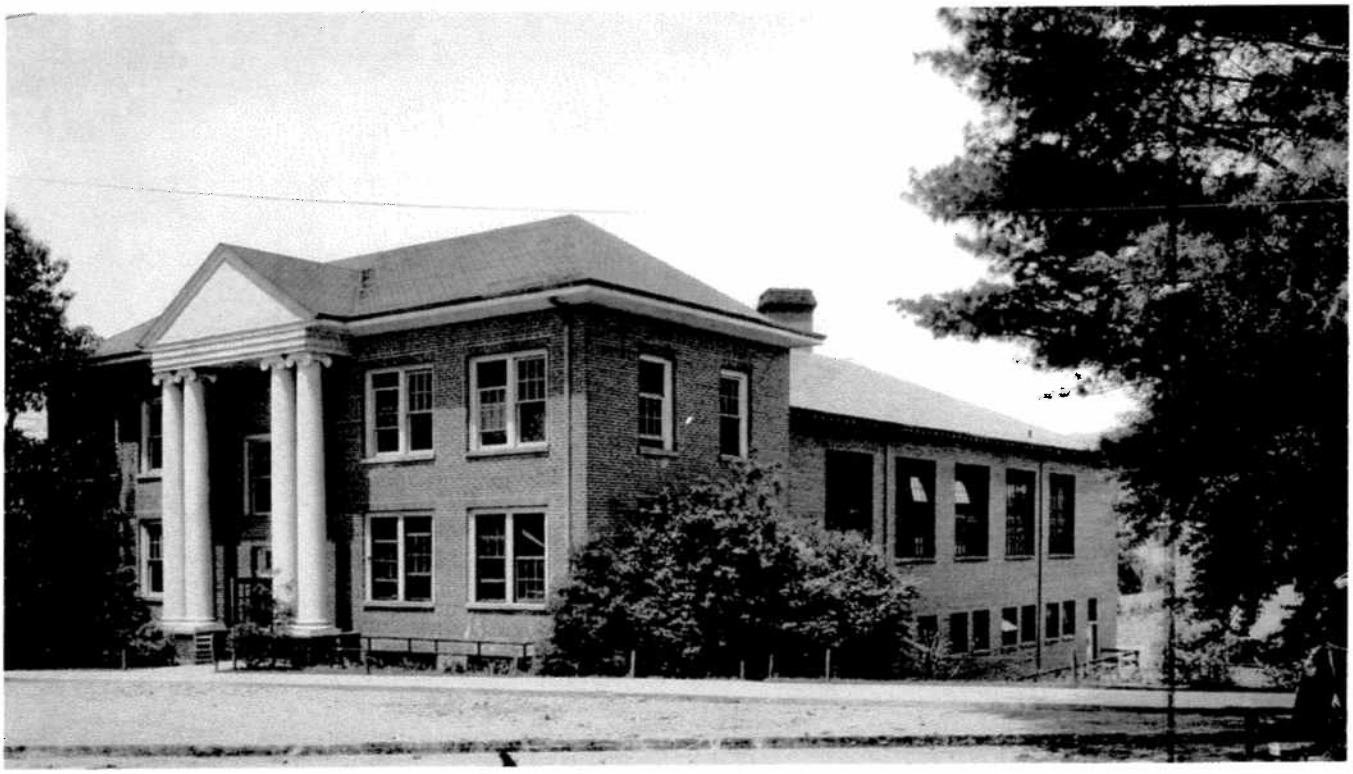


Image 12. View of McConnell Gymnasium from quad, late 1920's or early 1930's. (*MHC 83-6-871*)

Image 13. Men's team at the front entrance. *(MHC DN-BOX-3-216h)*

Image 14. Men's organization posing in front of McConnell Gymnasium. *(MHC 83-6-297)*

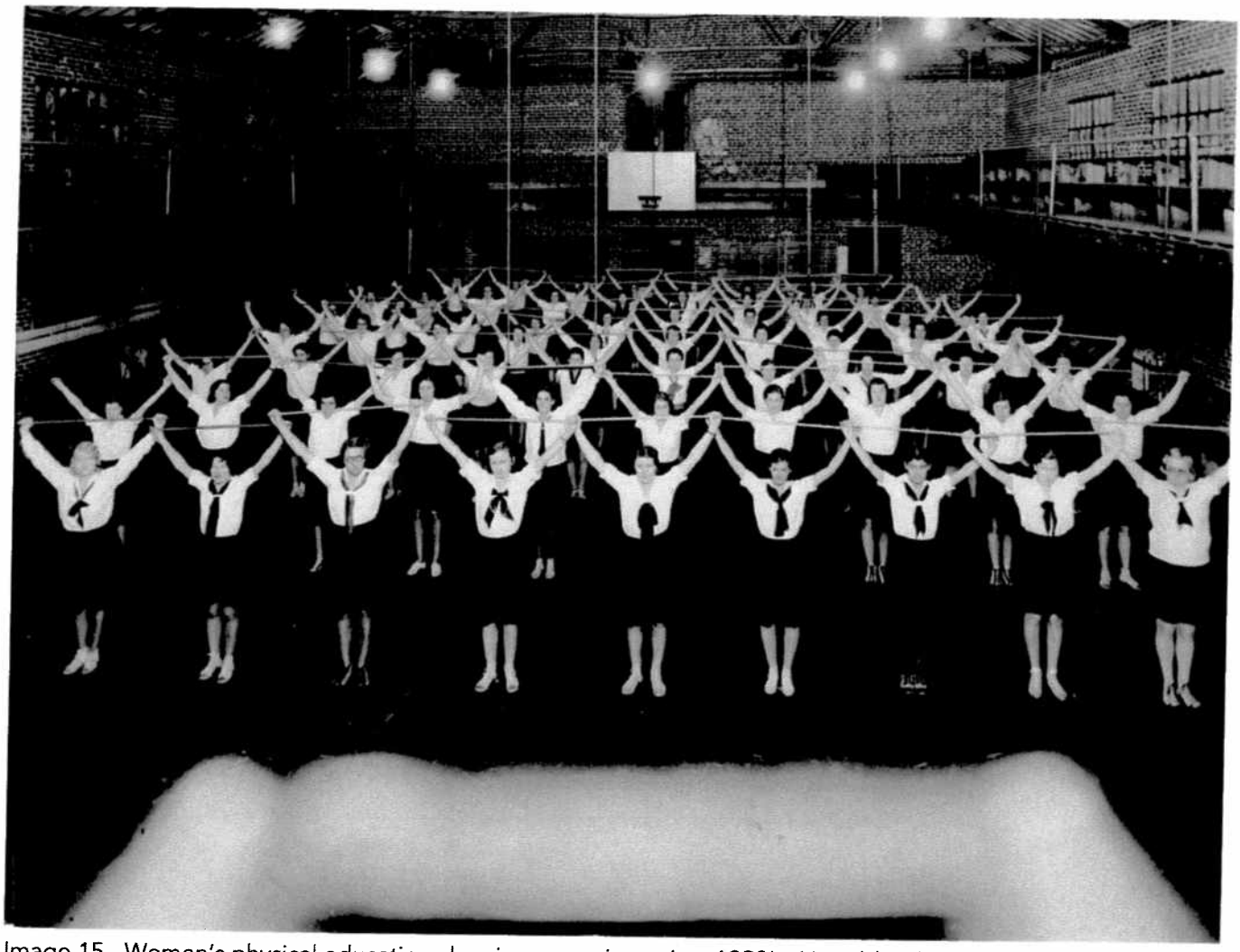


Image 15. Women's physical education class in gymnasium, circa 1920's. Note bleachers lining the balcony/track. (*MHC 83-6-295*)

Image 16. Women's physical education class, late 1950's. Note bleachers on balcony/track. (*MHC DN-216h*)

Image 17. Swimming pool, which was located in the basement. (*MHC DN-216i*)

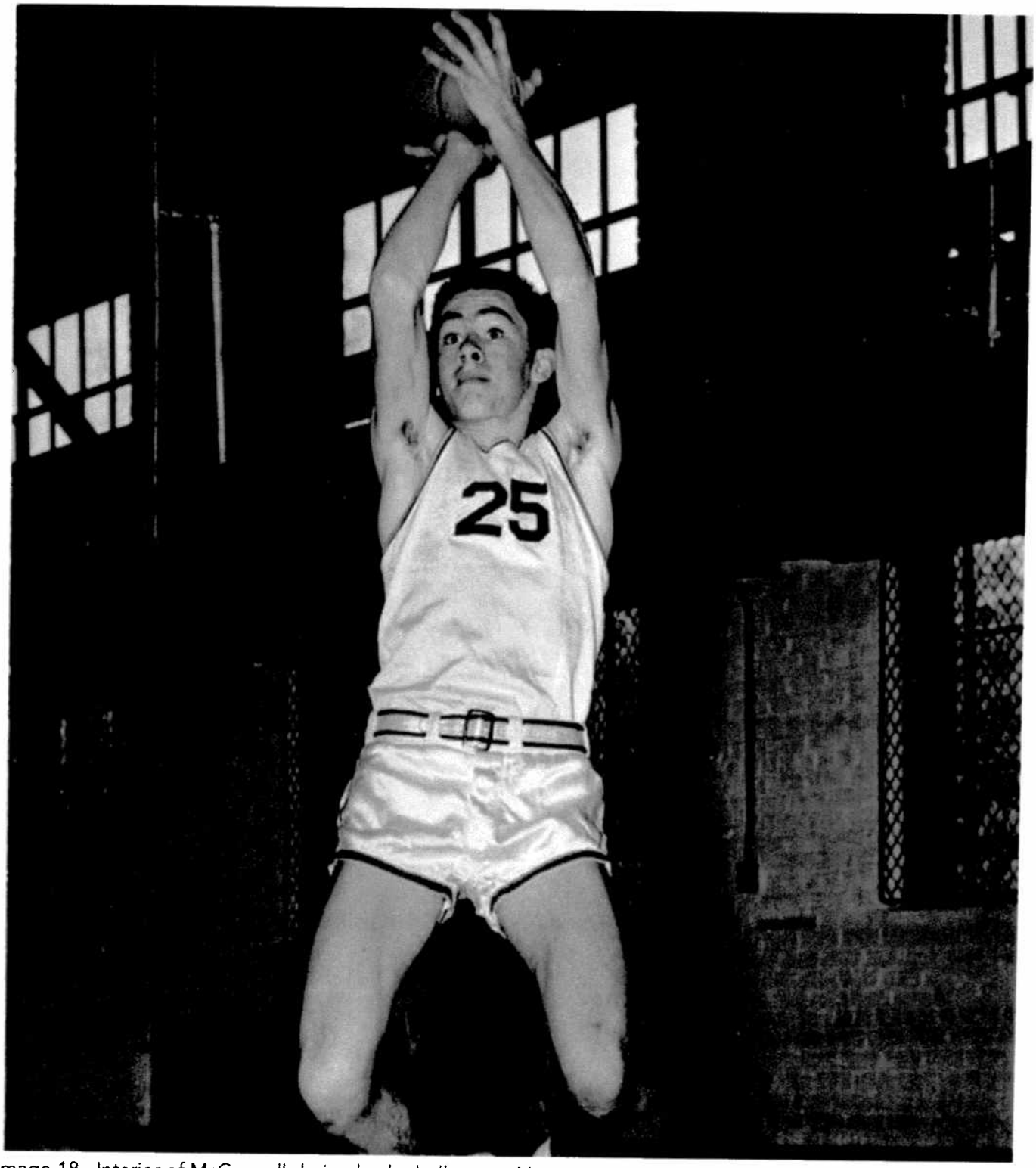



Image 18. Interior of McConnell during basketball game. Note protective steel mesh over windows. (*MHC DN_BOX_3_A*)

Image 19. View of McConnell Gymnasium from construction site of Renfro Library circa 1954. Note extensive English ivy growth on building and chimney. (*MHC ND-BOX-10*)

## ARCHITECTURAL DESCRIPTION

McConnell Gymnasium is divided into two symmetrical wings – a front classroom wing with a center stair with a room on each side, and a larger rear gymnasium wing. The two-story front wing faces the quadrangle and is divided into five bays, with the central bay dominated by a two-story Classical Revival entrance portico with slender paired Ionic columns. The entablature and tympanum of the portico are severe in execution, and were not constructed according to Smith's original design. Each bay has a pair of double hung 6/1 wood windows, which are repeated in two bays on the sides of the front wing.

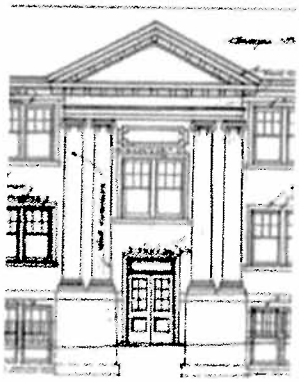


Figure 2: Entrance portico as designed. See Image 1.

According to Smith's drawings, the design of the portico was more classically detailed than constructed. The columns were to be heavier in proportion and raised on higher brick plinths. Although the entablature was to be typically plain in execution, there was planned a mutule band at the horizontal cornice as well as in the tympanum. No material for the tympanum is called out on the drawings; the intent may have been to build it of flush tongue-and-groove wood. It appears to be stucco.

The main soffit around the front wing does not have the substantial fascia as indicated on the drawings. Also missing from the executed design is the decorative plaque above the center hall window.

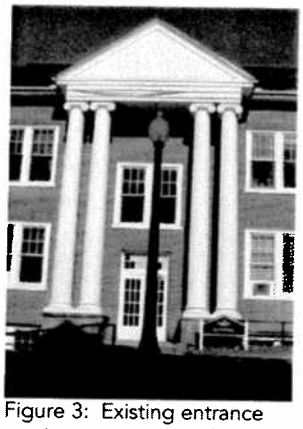


Figure 3: Existing entrance portico as constructed.

The rear gymnasium wing extends to the rear of the building and has large steel window sash that divide the side walls into five bays and the rear wall into three bays. A hipped roof with a common ridge line covers the entire building. A large tapered chimney sits at the northwest corner/

### Exterior

Exterior walls are of middling quality red brick, laid in a six-course header bond. Given the construction practices of the time, it can be assumed that the brick is bonded to a clay tile backup on the classroom wing. The interior face of the tile would serve as lath for the interior plaster finish. The gymnasium wing is constructed with solid brick walls with no interior finish.

The solid brick chimney at the northwest corner is a substantial architectural feature. From its square base, the chimney tapers gradually in and then begins to flare out very subtly to the top. The effect is very elegant and somewhat Craftsman in style. The original drawings show a straight chimney shaft with a standard stepped cornice, so again a substantial revision was made during construction.

Figure 4: Steel pivot window at track level, gymnasium.

### Windows and Doors

The classroom wing has wood double-hung windows, 6-over-1 light, paired on the façade and single on the end walls. The window casing is approximately 6" wide, with a brick molding. The window sills are cast stone (concrete). The double-hung windows appear to have all had good quality zinc flange weather-stripping installed.

The gymnasium wing has industrial style steel windows throughout. The large gymnasium windows have two pairs of center pivot sash, while the lower floor windows (originally at the swimming pool level) have a single pivot sash.

### Roof

With the exception of the front portico, all of the roofs have a hipped profile. From the original drawings, it appears that the roof material has always been a composition shingle. Gutters around the entire perimeter of the roof were part of the original design, although over the years they have been replaced.

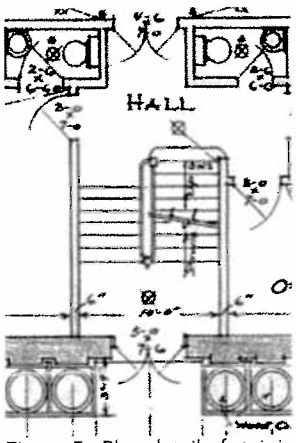


Figure 5: Plan detail of stair in Smith's original drawings.

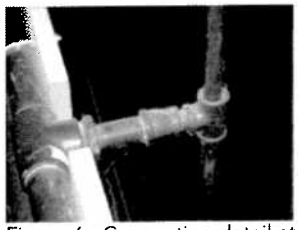


Figure 6: Connection detail at suspended balcony.

**Interior**

Interior finishes in the classroom wing are unpretentious. Walls and ceilings are of flat plaster. Door and window casings are flat wood, some with a simple backband molding. The tall wood baseboards have a characteristic base molding. All the trim and moldings are painted.

Interior doors have a five-horizontal-panel design and are painted. Mortise locksets are typical for the period, with bronze knobs and escutcheons.

The wood stair has a simple balustrade designed in a Craftsman style with plain newel posts with chamfered tops. Smith's drawings indicate a more refined design for the stair *(Figure 4)*. Floors are of white oak throughout, which have been covered with vinyl tile in the classroom wing. The ground floor is concrete throughout, with portions carpeted or covered with vinyl tile.

The gymnasium wing is industrial in character with exposed structural elements and no finishes. The open steel roof trusses are one of the major architectural features. A suspended running track, with its well detailed connections to the trusses and original pipe railing is a very unique structural feature.

The walls of the gymnasium are exposed brick, while the exposed rafters and roof deck make up the ceiling finish. The ground floor of this wing has been largely remodeled to house the dance studio and has no significant visible historic features.

## ARCHITECTURAL CONDITION ASSESSMENT

Figure 7: Deterioration of shingles due to runoff from upper roof.

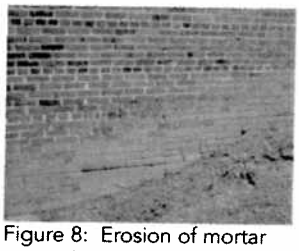


Figure 8: Erosion of mortar joints along grade at west side due to splash back from roof.

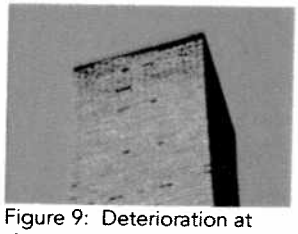


Figure 9: Deterioration at chimney.

Figure 10: Typical double hung window. Note weatherstripping.

### Roof

The overall condition of the composition shingles appears to be fair to poor. The problems with leaks appear to be confined to the intersection of the gymnasium wing with the classroom wing. Here, the gymnasium roof tees into the other roof, which has a higher soffit line. The resulting intersection creates a problem where the valleys dump onto the lower gymnasium roof. Directly beneath this area is where there have been ongoing leaks and subsequent repairs over the years. Evidence of leaks in the 2rd Floor classrooms also appear to be related to problems in these valleys and to poor flashing conditions along the brick wall.

Gutters throughout the building were a part of the original design. In several areas, sections of gutters are missing or are not connected to downspouts. Erosion in the brick masonry along the west wall of the gymnasium is directly related to splashback due to the failure or lack of gutters.

### Exterior Brick Masonry

The brick originally used was not the highest quality that was available at the time. The bricks have very irregular edges and a variety of fissures and dents throughout. This quality of brick is what typically would have been seen on an industrial building or on the rear alley wall of a commercial building of the period. It should be noted that the brick appears to have been well fired and is in good condition overall. With the exception of a few bricks on the chimney, there is no visible evidence of delamination or failure of the brick itself.

For the most part, the mortar appears to be sound except where extreme exposure to water has eroded the joints. Splash back along the grade at the east and west walls (due to failure of or lack of gutters) has eroded mortar joints and stained the brick.

In the chimney, the mortar joints in the top three feet of the stack have been eroded due to a combination of water entry and acidity of the coal soot. The weight of the concrete chimney cap appears to be keeping much of this brick in place. This area should be considered a hazard and until restored should be roped off to prevent injury by falling debris.

### Windows

The wood double hung windows exhibit extreme paint and glazing putty failure throughout. The wood substrate shows evidence of considerable weathering. However, the window sash components appear for the most part to be intact. High quality zinc flange weather-stripping had been installed – possibly in mid-century – and appears to be serviceable. The wood frame and exterior trim are in similar condition. Overall, the windows appear to be in restorable condition.

The steel industrial-style windows exhibit typical paint and glazing putty failure. In many areas rust is evident. Several of the operable center-pivot sash have been replaced with awning-type sash. However, the steel windows appear to be in restorable condition overall.

### Doors

The glazed front entrance doors appear to be original or early replacements. All are in poor condition and have been repaired with acrylic glazing and wood trim that does not match the muntin profile.

Several of the original five-horizontal-panel interior doors remain intact. Smith's drawings indicate all interior passage doors to be 36" wide. Several of the doors are

Figure 11: Front entrance door.

drawings indicate all interior passage doors to be 36" wide. Several of the doors are only 32" wide which will be an accessibility conflict in some areas. Other doors of various sizes and styles have been added over the years.

**Interior Floor Plan**

The floor plan as shown in the original drawings has survived largely intact, with the exception of the Ground Floor. In the classroom wing, the only significant alterations have been the addition of a few walls within the office and classroom spaces on the First Floor. The stair as originally designed compared with the stair as built shows that this change affected several adjacent features, including location of toilet rooms, doorways, and vent shafts.

The original design for the building showed a separate spiral staircase from each locker room entrance accessing all three levels at the northeast and southeast corners of the gymnasium wing. The framing repairs for these features can readily be seen in the balcony floor.

The gymnasium as a whole remains remarkably preserved, with most of the alterations being reversible. Later construction at the First Floor level (gymnasium floor) includes the stage, raised seating areas, and miscellaneous partitions. The two toilet rooms are also later additions. At the Second Floor Balcony (originally a suspended running track), alterations include the addition of a few partitions at the north end of the track and the addition of a wood balustrade in front of the original pipe railing. Smith's drawings indicate a banked track, with the corners sloped up to a platform where the spiral stairs ended. The regularly spaced joist pockets along the exterior walls suggest that the track may have been intended to be put at a higher elevation. Comparing Smith's drawings with existing conditions, it appears that during construction the overall height of the exterior walls was lowered, requiring that the track elevation also be changed.

Figure 12: Damage in plaster ceiling at 2nd floor classroom.

The Ground Floor has been the most altered. The 1923 plans show the swimming pool design. However, the pool was not constructed until several years later. It was floored over in recent years and the space is now used as a dance studio. All of the original locker rooms have also been removed.

**Walls and Ceilings**

Walls and ceilings in the classroom wing are plaster throughout. In the Ground Floor of the gymnasium wing, the original finishes in the locker rooms and offices were likely plaster with some ceramic tile. However, in the Storage Room (originally the Boys' Bath), there is tongue-and-groove beaded board as a ceiling finish. As this material seems an unlikely finish for such a high humidity area, it may have been added at a later date.

At the upper two floors, the plaster appears to be in good condition overall, with localized areas of damage caused by roof leaks. The plaster on the basement below-grade exterior walls shows a history of deterioration and repairs due to moisture damage.

The finishes in the pool area appear to have been simply exposed brick walls (possibly painted) with exposed steel beams. The original ceiling finish in this area is unknown. The current finishes are all recent and in fair to good condition.

**Flooring**
It is assumed that the original flooring on the First and Second Floors was wood. However, most of the original flooring has been covered with later vinyl tile or carpet. The Ground Floor is concrete throughout, and the boys' and girls' bath areas originally had tile floors.

Areas of the Ground Floor, including the Dance Studio have had the floor raised to install wood flooring. Although there is no indication on the original plans, the ground floor level slab in the entire gymnasium /swimming pool wing was set approximately 4" lower than the classroom wing. This was presumably done to prevent flooding of the classroom wing. These level changes create challenges for making this level accessible.

Figure 13: Entrance stair hall. Double doors at landing lead to gymnasium.

**Interior Woodwork**
The original interior door and window casing is a plain 1x6 board with a backband molding. The baseboard is typically a plain 1x8 board with a molded base cap. These features are largely intact and in good condition. There is no evidence of other significant moldings in the building. The underside of the stairway is finished in tongue-and-groove beaded board.

The stair balustrade was not constructed as designed; in fact, the entire stair was not constructed as designed. Smith's drawings indicate newel posts turned on a 45 degree angle along with a curved balustrade. The balustrade as constructed has simple square newel posts fastened to the side of the stair carriage plus a stock balustrade running between. Several of the newel posts have loosened up over the years and create a hazardous situation. The entire stair assembly is loose and creaks when walked on.

**Hazardous Materials and Conditions**
The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and boiler. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical ceiling tiles, and plaster and gypsum wall board joint compound. Mold can be present wherever water damage to absorbent materials has occurred.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant. See the Introduction for additional information.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. The building appears constructed at one period in time with interior renovations performed over the years since. The front classroom wing is composed of a wood framed roof, wood framed floors bearing on wood stud walls and brick bearing walls, and foundation brick walls. The gymnasium section is composed of a wood and steel truss roof, wood and steel framed floors, cast-in-place concrete floors, and foundation brick and cast-in-place concrete walls.

### Foundation & Basement

Figure 14: Floor structure under ground floor (originally swimming pool) level.

The gymnasium foundation consists of brick perimeter retaining walls with a concrete slab-on-grade and a crawlspace. Portions of interior walls are composed of cast-in-place concrete. The footing below the brick foundation walls is likely another layer of brick or a thin layer of brick mortar. The footing below the cast-in-place concrete walls is likely a cast-in-place, continuous, concrete strip footing.

### Ground Floor

The ground floor framing in the gymnasium wing (where the pool and locker rooms were originally located) is a cast-in-place concrete slab supported on steel beams, cast-in-place concrete beams, and cast-in-place concrete walls *(Figure 7)*.

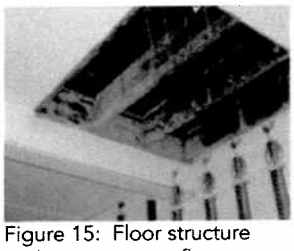


Figure 15: Floor structure under gymnasium floor.

The classroom wing foundation appears to be brick perimeter retaining walls with a concrete slab-on-grade. The interior load bearing walls are likely wood studs above the first floor and a load bearing brick wall and footing below. The footing below the brick foundation walls and interior brick walls is likely another layer of brick or a thin layer of brick mortar.

### First Floor

The gymnasium wing floor framing is composed of wood sheathing on wood floor joists. Steel beams are visible in several areas supporting the floor joists *(Figure 8)*. The steel beams span between load bearing masonry walls and steel columns.

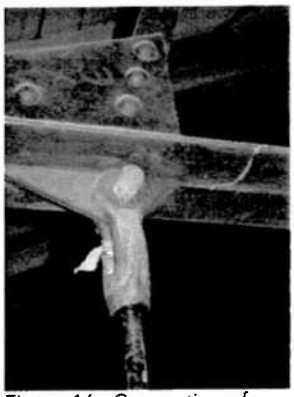


Figure 16: Connection of balcony supports to truss.

The classroom wing floor framing is composed of wood sheathing on wood floor joists with an original lath and plaster ceiling.

### Second Floor

The gymnasium balcony framing travels around the exterior perimeter of the third story. The framing is composed of wood sheathing on wood floor joists. The joists are supported by joist pockets in the exterior brick wall and by steel channels along the interior. The steel channels are supported by steel hanger rods attached to the roof steel truss system *(Figures 6 & 16)*.

The classroom floor framing is composed of wood floor joists spanning between the exterior brick walls and interior load-bearing wood stud walls. The wood stud walls and ceilings are covered with original lath and plaster. Portions of the ceiling have been replaced or repaired.

Figure 17: Gymnasium roof structure.

### Roof Framing

The gymnasium roof is composed of nominal 2" wood sheathing on wood rafters spanning across a steel truss system *(Figure 10)*. The steel trusses span between exterior load bearing brick walls. The classroom roof attic and roof structure were not visible, but based on the framing observed, it is likely the roof is composed of wood sheathing on wood rafters bearing on interior and exterior load-bearing walls.

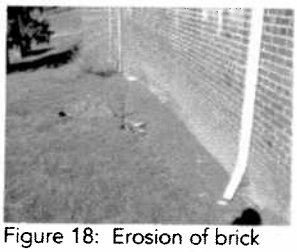


Figure 18: Erosion of brick masonry along grade, west side due to runoff from roof.

Figure 19: Repairs to roof sheathing and framing where leak is re-occurring.

**Evaluation and Observations**

There are two categories of sources of structural problems:

1. Moisture from both exterior and interior sources causing deterioration of the bricks and brick mortar *(Figure 18).*
2. Moisture from failure of the roof membrane causing deterioration of sheathing and rafters *(Figure 19).*

Water is entering the gymnasium basement under the new exterior wood walkway. The water is transporting exterior soils into the basement as well as periodically flooding the basement. The exterior grading is directing water towards the building in several areas. One area is at a lower level door where water is entering the building through the door. The door is warped and inoperable.

A portion of the gymnasium balcony has been re-framed to fill in what appears to be an old stair opening. The framing appears inadequate based on the fact that seven joists have been cut and the cut joists are being supported by only two existing joists with no additional reinforcement.

**Weakened or Failed Members**

Several gutters are missing on different sides of the building and portions of the remaining gutter have pulled away from the rafter tails, causing water to accumulate on the brick sides and foundation of the building. Several of the downspouts are directing water against the foundation of the building, causing hydrostatic pressure build-up behind the foundation walls and erosion of the bricks and brick mortar.

The boiler system was leaking water excessively. The combination of the moisture and heat have accelerated the rusting process on the steel floor beams and accelerated the deterioration of the mortar in the brick foundation walls.

General prolonged exposure to moisture has weakened or failed members. In the gymnasium basement there is a wood partition wall that due to moisture and contact with concrete is rotted to the extent that it should be removed to prevent injury.

Flashing problems at the connection of the front and rear wings has led to ongoing damage of roof sheathing and rafters. Several areas have been replaced over the years.

**Summary**

The structure exhibits slight signs of distress due to lack of maintenance. The primary maintenance problem affecting the structure is drainage of water away from the structure. Gutters clogged with vegetation, missing gutters, downspouts draining directly against the building walls, and exterior grade directing water against the building foundation were observed. In general there are only a few localized structural deficiencies owing to the original construction.

## BUILDING SYSTEMS ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC.

### HVAC Systems

Heating is provided by a cast-iron natural gas-fired steam boiler, located in a boiler room in the basement. This boiler also provides steam for heating in Marshbanks Hall. Insulation is missing from much of the steam and condensate piping in the boiler room and crawlspace area. An abandoned Kewaunee steam boiler remains in place in the boiler room. There is also a large tank-type steam-powered domestic water heater which is abandoned. The pump on the condensate receiver appears to have bad bearings. Steam radiators are used throughout the building. Cooling is provided in some office areas using window air conditioners, and in the dance studio and office areas on the first floor with a split system air conditioning unit. There is no cooling system in the former gymnasium.

### Electrical Systems

Electrical service is provided underground to an exterior mounted 200 amp panel located on the north end of the building, near the boiler room. There is an additional service that apparently serves the former gymnasium, including stage lighting and sound systems. There are insufficient electrical outlets in the building. There is no automatic fire alarm system.

### Plumbing Systems

Existing plumbing systems consist of water, waste, and vent systems, all of which are in need of upgrade. Water service enters the building in the basement. It is not clear where the building sewer exits the building. Hot water is provided by an electric water heater. The building is not sprinkled. Plumbing fixtures are not water-saving type, and generally do not meet accessibility codes. The number of plumbing fixtures is addressed in the Building Code Assessment section.

## CURRENT PHOTOGRAPHS

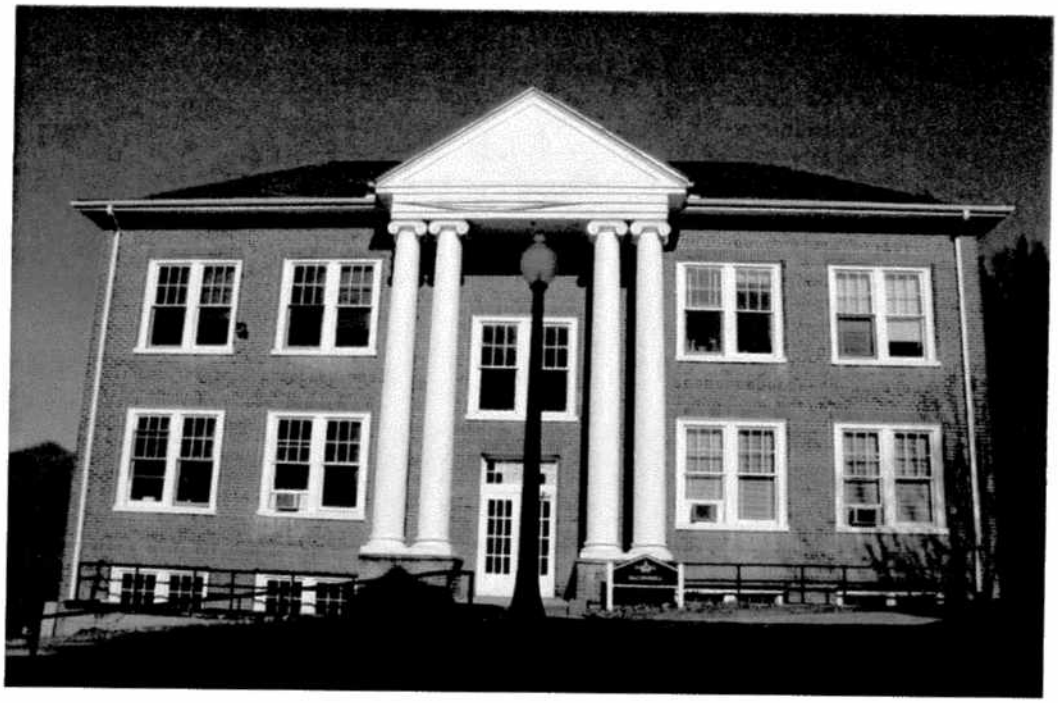


Photo 1. McConnell Gymnasium front elevation.

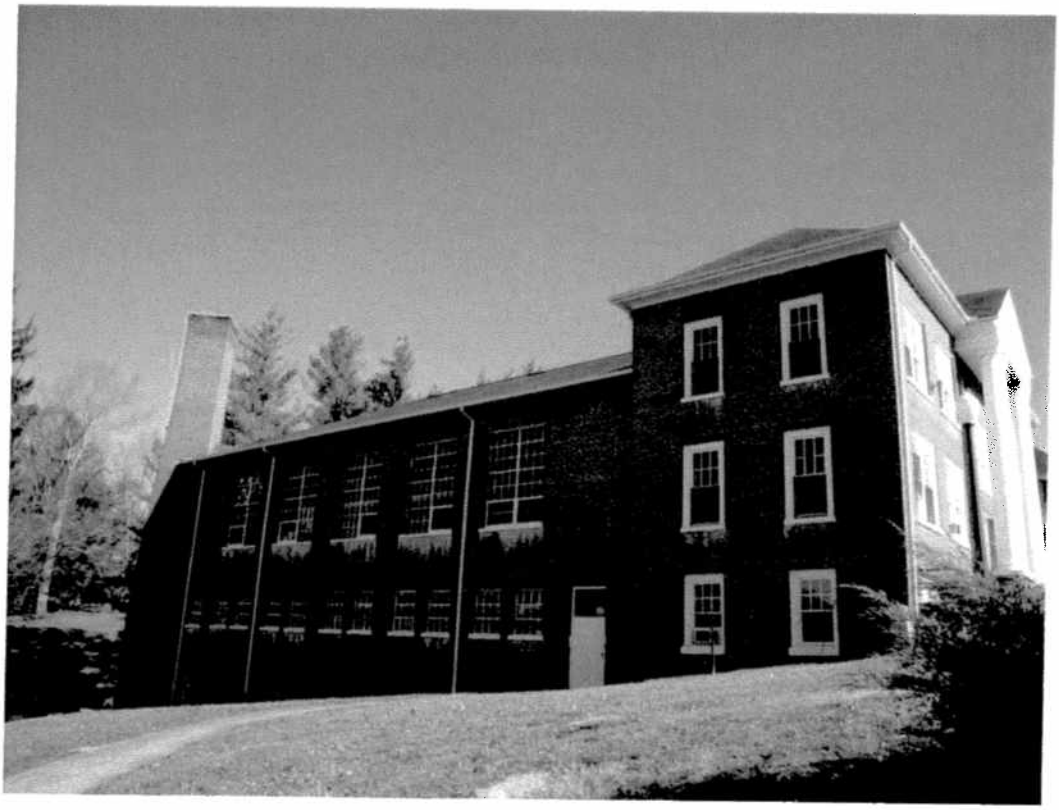


Photo 2. West elevation. Note staining on brick from painted cast stone window sills.

Photo 3. East elevation. Note missing sections of gutter that allow splashback against foundation.

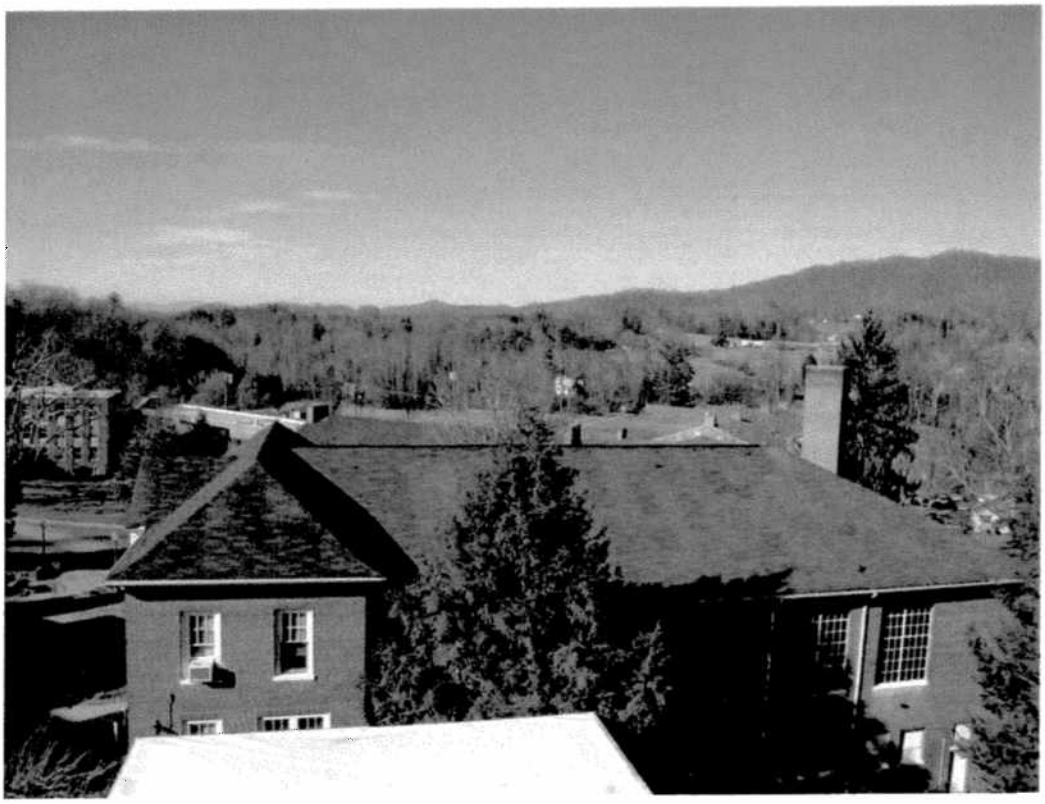


Photo 4. Roof of McConnell viewed from Marshbanks Hall roof. Note section of shingles replaced along left end of gymnasium roof where leaks have been a reoccurring problem.

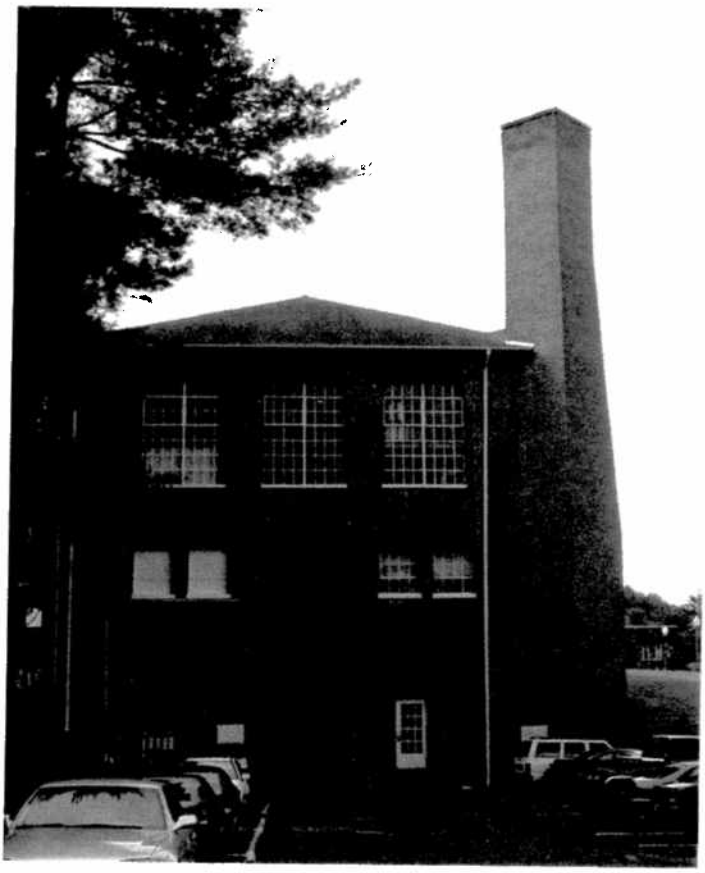


Photo 5. Rear elevation. Note erosion of mortar joints in top courses of chimney. Chimney does not have a protective cap.

Photo 6. Detail of front portico. Note deterioration of applied trim along frieze. Also note excessive paint build-up on all wood surfaces.

Photo 7. East side of building where main roof intersects gymnasium roof. Note staining and deterioration of shingles. This area directly corresponds with current leaks as well as past repairs.

Photo 8. Erosion along west foundation wall caused by gutter failure and downspouts not piped away from building. Stepped concrete foundation has been exposed.

Photo 9. Area well along west front side of building is collapsing and is shored up with steel.

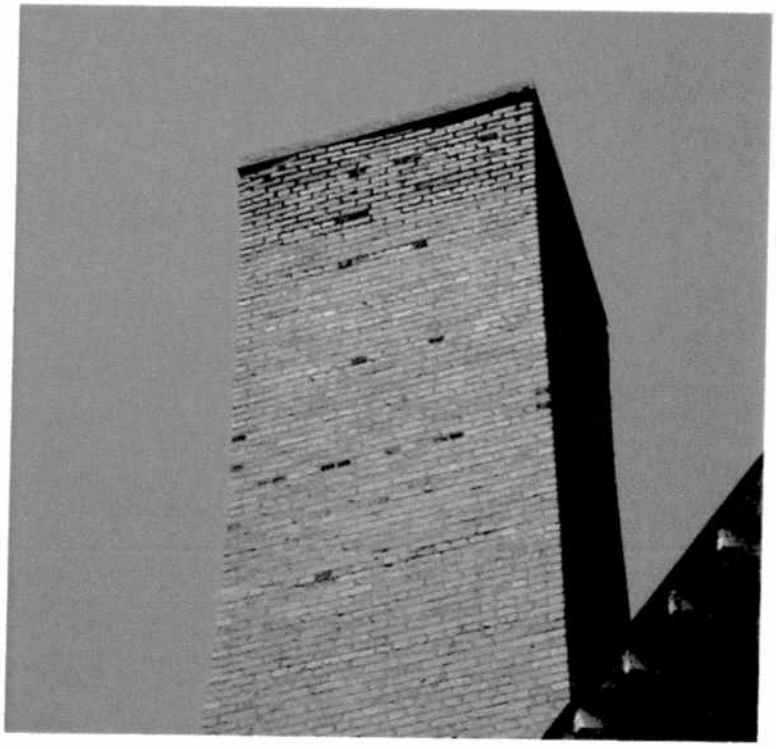


Photo 10. View of chimney showing erosion in mortar joints along top courses. Many bricks are displaced and are a hazard.

Photo 11. Typical condition of paint on wood soffit.

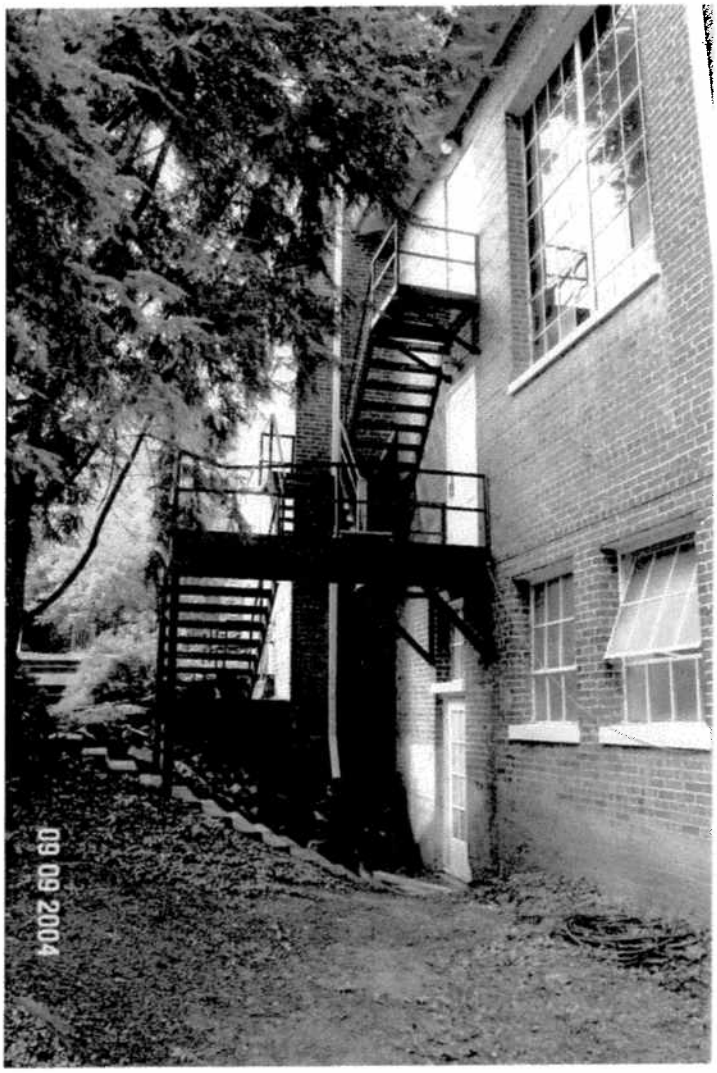



Photo 12. Existing fire escape on east side. Original entrance to Ground Floor is difficult to access.

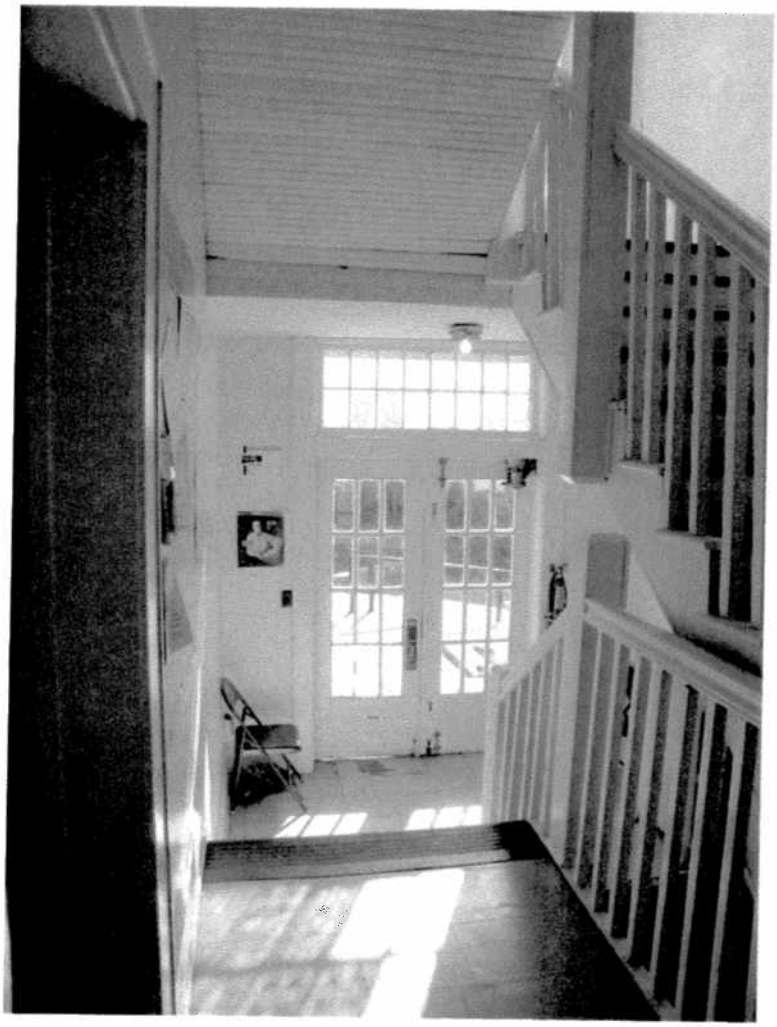


Photo 13. Main Floor entrance and stairway. Split level entrance cannot be made accessible without destroying original stair hall.

Photo 14. Condition of original balustrade is very poor. There are also structural issues with the stairs and landing.

Photo 15. View from balcony toward rear of gymnasium.

Photo 16. View from balcony toward front (north) of gymnasium. Note wood infill balustrade at original steel pipe railing.

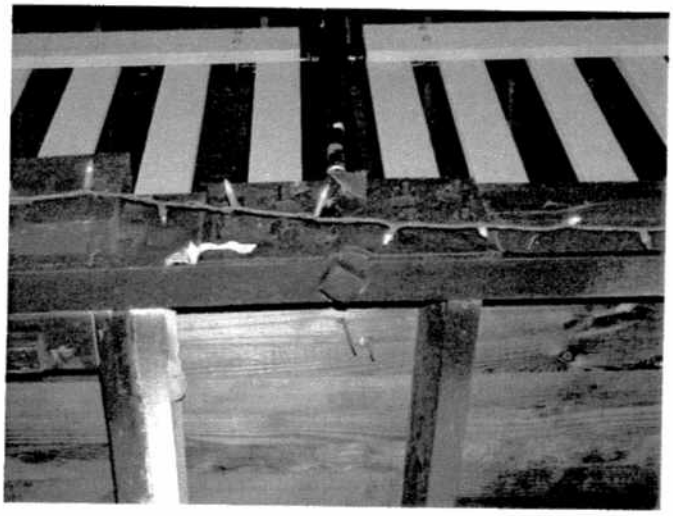


Photo 17. Connection at balcony support.

Photo 18. Classroom at 2nd Floor.

Photo 19. Dance studio was formerly the swimming pool. Pool structure survives under wood floor.

**BUILDING CODE EVALUATION**

Two codes were reviewed to determine which would be the most beneficial for the project and allow as much historic fabric to remain in place as possible.

**NC REHABILITATION CODE ASSESSMENT**

The building was evaluated under the NC Rehabilitation Code. These code provisions would apply should any "Reconstruction" work be undertaken. Refer to the Introduction for definitions.

**Construction Type**

**Type III-B (Non-Protected)**

- Exterior Walls: 1'-1" solid brick masonry or 1'-5" thick masonry assembly with hollow clay tile and brick facing.
- Columns: steel encased in plaster (Ground Floor).
- Floor Structure:
  - Basement: 6" concrete slab on grade except for wood structure at pool infill. Infill structure undetermined; assume 2x12 wood joists at 1'-4" o.c.
  - Gymnasium Floor: 2x10 wood joists at 1'-4" o.c. spanning between steel beams at 13' o.c.
  - Classroom Floor: 2x12 wood joists at 1'-4" o.c.
  - Balcony: 2x8 wood joists at 1'-4" o.c.
- Roof Structure: 2" thick nominal wood framing typical throughout; exposed steel trusses at gymnasium.

**Current Uses**

**A-3 – Assembly:** Student Activity Center
**B – Business**: Faculty Offices
**B – Business**: Classrooms

**Proposed Use Groups & Occupancy Loads**

**A-3 – Assembly:** Student Activity Center; 15 sq. ft. net /person

- 1st Floor: 3,797 sq. ft. net
- 2nd Floor Balcony: 1,556 sq. ft. net (41% of Main Floor)
- Total Occupancy:
  - 1st Floor: 253 persons
  - 2nd Floor Balcony: 104 persons

**B – Business:** Faculty Offices, Miscellaneous; 100 sq. ft. gross / person

- Ground Floor: 5,902 sq. ft. gross existing (including 1,181 sq. ft. storage)
- 1st Floor: 1,320 sq. ft. gross existing
- Total Occupancy:
  - Ground Floor: 60 persons
  - 1st Floor: 14 persons

**B – Business:** Classrooms; 20 sq. ft. net / person

- Ground Floor Dance Studios: 1,963 sq. ft. net existing
- 2nd Floor Classrooms: 818 sq. ft. net existing
- Total Occupancy:
  - Ground Floor: 98 persons
  - 2nd Floor: 41 persons

**Scope of Work**

Extent of work would require the project to be considered a "**Reconstruction**." Basic and Supplemental Requirements in § 1.14 would apply. There is no Change of Use proposed for the building, so § 1.31 does not apply.

**Basic & Supplemental Requirements**

## Use Group A-3

- Fire suppression system is not required as area is under 12,000 sq. ft. gross (1.14.a).
- Automatic fire alarm system in storage, workshop or furnace rooms required as work exceeds 25% of gross area of building (1.14A.a.b).
- Manual fire alarm system not required throughout building as building less than 4 stories (1.14A.c). This assumes Basement will not be counted as story.
- Two exits are required from each floor and two exits are required from balcony as potential occupant load exceeds 50 persons (1.14.b). A new exit stair is proposed for the northeast corner of the building. Refer to Proposed Floor Plans for details.
- Two egress doorways from Ground Floor Dance Studio are required as potential occupant load exceeds 50 persons (1.14.c).
- Doors must swing in direction of travel when serving occupant load exceeding 50 persons (1.14.c).
- Panic hardware is required in doors from Assembly area (gymnasium floor and balcony) as occupant load exceeds 100 (1.14.c.2).
- Capacity of Means of Egress (1.14.d):
  - 253 occupants = 75" min. stair egress width min. required; 93" provided with proposed new exit stair
  - 253 occupants = 56" min. door egress width required; 90" provided with proposed new exit stair
  - Main entrance must accommodate 1/2 total occupant load: 36" min. width required; 68" width provided
- Dead end corridors must not exceed 35' (1.14.e)
- Emergency exit lighting and illuminated exit signs with battery backup required (1.14.f).
- Handrails required at all exit stairs and ramps (1.14.h).
- Guardrails required at all exit stair and ramp landings more than 30" above floor or grade (1.14.i).
- Vertical opening protection of 30-minute fire barrier permitted for buildings not exceeding 3 stories (1.14.j):
  - Vertical opening protection not required when connecting Ground Floor and Balcony. This assumes existing balcony can meet the Building Code definition of a mezzanine.
  - All doors opening into existing stairway must be 30-minute rated.
- Existing historic wood doors can be upgraded to meet requirements per Appendix B - Fire Ratings of Archaic Materials and Assemblies.
- Min. plumbing fixtures for total 356 persons (Assembly) based on NC Plumbing Code revisions effective 7/1/2006 (1.14.l):
  - 178 male: (1) water closet / 125 = (2) required
  - 178 female: (1) water closet / 65 = (3) required
  - lavatory / 200 persons = 1 required
  - (1) drinking fountain (2 required per ADA)
  - (1) service sink
- All new HVAC must meet NC Mechanical Code (1.14.m).
- Historic interior finishes are primarily plaster with Class I flame spread rating and meet all requirements of Section 1.11.c (1.14.n).

## Use Group B

Requirements of Use Group A-3 shall be used throughout the building since no occupancy separation is proposed.

**Accessibility Requirements**

**Entrance Requirements**
Creation of an accessible entry is technically not required by the Rehab Code unless the entrance steps are altered or replaced (§ 1.7.e.4). However, this work is recommended to meet requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG), as consistent with the NC Accessibility Code. The main entrance is not currently accessible, and other primary building entrances are not currently accessible.

A new accessible entrance is proposed for the west side of the building at the Ground Floor level. The existing door would be reworked and a new elevator shaft would be added. Refer to Proposed Floor Plans for details.

**Toilet Requirements**
New and reconfigured toilet rooms must comply with Accessibility Code (1.7.e.2.iii) All new and reconfigured toilet facilities are accessible.

**Historic Certification Provisions**

**Certified Historic Buildings** (1.33)
The building is eligible for listing on the National Register as contributing to Mars Hill College Historic District. The nomination is in progress. Listing on National Register allows for special provisions under the NC Rehab Code if the building is undergoing work consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties. Certification as Historic Structure for Building Code Purposes must be approved by the State Historic Preservation Office.

**Stipulations**
- Original or replica materials and original methods of construction may be used.
- Exterior walls not required to meet requirements for fire resistive construction.
- One-hour fire resistive construction not required where existing finish is lath and plaster.
- Historic roof materials may be maintained or replaced with same.
- Existing door openings and corridor and stairway widths less than required may be approved as allowed by building inspector.
- Existing front or main exit doors not required to swing in direction of travel when serving less than 50 people or when other approved exits are provided.
- Existing or replica hardware shall be permitted provided no life safety hazard and meets intent of Accessibility Code.
- Transoms in corridors and other fire rated walls may remain.
- Existing historic finishes may be retained.
- Stairway requirements (compare with requirements in Section 1.14.j):
  - Stairway enclosures may be omitted for portion of stair serving first and second floor.
  - In buildings 3-stories or less, exit enclosure construction shall limit spread of smoke, but shall not require fire resistance rating.
  - Original riser height and tread width may remain for stairs being repaired or replaced.
- Railing requirements:
  - Existing handrails may remain or replaced to match.
  - Existing 30" guardrails may remain if drop off less than 48".
- Exit signs may be of alternate design and/or location.
- Existing ceiling heights may remain.

## NC STATE BUILDING CODE ASSESSMENT

The existing building conditions and proposed building conditions (after rehabilitation) were also evaluated under the NC State Building Code, Vol. IX – Existing Buildings, and Chapter 34 of the NC Building Code. The evaluation centered on the categories of Fire Safety, Means of Egress, and General Safety.

Under the Existing Building Code, alterations, repairs and rehabilitations may be made to an existing building without requiring the entire building to comply with the Code for new buildings. Work may be done utilizing the same materials as used on the original building as long as there is no reduction in structural capacity, egress and fire safety. For certified historic buildings, there are exemptions from some requirements of the Code.

### Summary of Code Evaluation

The evaluation of the existing building conditions under Section 3409 reveals that the existing building fails minimum Fire Safety, Means of Egress and General Safety requirements.

The building was then re-evaluated assuming improvements in egress and fire safety. With the proposed improvements, the building passes in all categories without the need to add a fire suppression system. If a fire suppression system were to be added, the requirements of other categories could be manipulated to balance the overall score. Refer to the following section for a detailed list of proposed improvements.

### Building Code Requirements

- Fire partitions and floor assemblies may have less than 1-hour fire resistance. (3409.6.4). The deficiency in points does not affect the overall score.
- Corridor walls may have less than 1-hour fire resistance. (3409.6.5). The deficiency in points does not affect the overall score.
- Vertical openings (including the main stairway), must have at least 1-hour fire protection. (3409.6.6). This requirement will affect the construction of the main entrance stairway.
- Doors into the main stairway may have to be fire rated, requiring detailed upgrading or replacement.
- Any proposed new HVAC system is assumed to be a central boiler/chiller system without connecting ductwork. (3409.6.7)
- A fire alarm system in accordance with Section 907 of the NC Building Code will be required. (3409.6.8)
- Smoke control is not required or provided for. (3409.6.9)
- Capacity of the means of egress and number of exits shall comply with NC Building Code. (3409.6.11). Addition of new exit stair is required.
- Elevator controls shall comply with NC Fire Prevention Code. New elevator allows compliance.
- Accessibility issues are addressed under NC Accessibility Code.
- A fire suppression system is technically required for Assembly portion of the building, but is not proposed. (3409.6.17). The deficiency in points does not affect the overall score.

## NC ACCESSIBILITY CODE ASSESSMENT

Chapter 51 of the NC Accessibility Code addresses compliance with regard to historic preservation projects. For a certified historic building undergoing rehabilitation work (refer to Existing Building Code, Chapter 3), general requirements shall include:

- An exterior accessible route, including access to parking.
- Exterior ramps as required.
- An accessible entrance.
- Interior accessible route, including accessibility to all publicly used spaces located on the level of the accessible entrance (Ground Floor)
- If elevator is provided, accessibility shall be extended to all publicly used spaces
- Accessible toilets located on accessible level (Ground Floor). Signage on other floors shall indicate direction to accessible toilets.

**SUMMARY OF BUILDING CODE EVALUATION**

Comparing requirements between both the NC Rehabilitation Code and the NC State Building Code for McConnell Gymnasium, it can be seen that use of either code will allow the building to be rehabilitated without substantial intervention. However, given the complex nature of a rehabilitation project, The NC Rehab Code may offer more flexibility than the Building Code when working with this older, historic building. It appears that a greater amount of historic materials and features can be retained under the Rehab Code, thereby preserving the overall historic and architectural integrity of the historic building.

In order to complete the code evaluation, many assumptions had to be made regarding the building program requirements. Final program requirements will necessitate a more in-depth code evaluation.

**PRESERVATION RECOMMENDATIONS**

**Critical Maintenance Issues**

1. **Roof and Drainage**
   - Isolate source of leaks where two roofs intersect
   - Replace/repair any deteriorated rafters and sheathing
   - Replace all shingles and flashing at intersection of roofs
     - Alternate: Replace all shingles if overall remaining lifespan indicates
     - Install "ice dam" membrane underlayment at all valleys and around intersection of roofs
   - Replace any deteriorated fascia or soffit material
   - Re-hang gutters around building
     - Connect to downspouts
     - Pipe downspouts away from building, temporarily if required
2. **Windows.** Protect original wood and steel windows from further weathering
   - Replace broken and missing glass
   - Replace missing and deteriorated glazing putty
   - Touch up paint at exposed wood or metal
3. **Doors.** Protect original wood doors from further weathering
   - Replace broken and missing glass
   - Replace missing and deteriorated glazing putty
   - Touch up paint at exposed wood
4. **Brick Masonry & Foundation**
   - Repoint any critical areas where mortar is missing to prevent water from entering wall
     - Special attention required along grade where severe erosion has occurred
     - Re-set any loose bricks at top of chimney to prevent collapse
   - Waterproof foundation walls around classroom wing
     - Excavate foundation perimeter
     - Apply waterproofing membrane to foundation walls

    - Install foundation drain
  - Repair/rebuild collapsing area wells at front wall
    - Inspect drains and clear as required
5. **Interior Stair**
   - Repair and/or re-anchor balustrade to stair carriage

**Exterior Rehabilitation**

The following scope of work would be in addition to or in combination with the work items listed under Critical Maintenance. This work would restore the building to a well-maintained condition, preserving historic materials and features as possible. However, this work does not take into consideration Building Code requirements.

1. **Wood Windows.** Fully restore original wood windows
   - Remove sash from frames
   - Prepare sash for repair
     - Remove all existing deteriorated paint
     - Remove all glazing putty
     - Salvage any original glass and label for reuse
   - Repair deteriorated sash as required
     - Epoxy consolidation
     - Replacement of damaged sections
   - Glaze and finish sash
     - Apply primer to all surfaces
     - Re-glaze sash using salvage glass as possible
     - Apply finish paint coats
   - Repair and repaint frame
     - Epoxy consolidation and/or replacement of deteriorated sections
     - Remove all deteriorated paint
     - Apply primer and finish coats
   - Reinstall sash in frame
     - Replace sash weight ropes
     - Install weather-stripping at sash perimeter
   - Install new interior storm windows
     - Equal to Magnetic One Lite™ as manufactured by Allied Window Inc.
     - Stationary or operable as determined by building program
2. **Steel Windows.** Fully restore original steel windows
   - Prepare sash for repair
     - Remove all existing deteriorated paint
     - Remove all glazing putty
     - Remove all surface rust
     - Salvage any original glass and label for reuse
   - Finish and re-glaze sash
     - Apply metal primer to all surfaces
     - Re-glaze sash using salvage glass as possible
     - Apply finish paint coats (gloss)
   - Install weather-stripping at operable sections
   - Install new interior storm windows
     - Equal to Magnetic One Lite™ as manufactured by Allied Window Inc.
     - Stationary or operable as determined by building program
3. **Exterior Masonry.** Clean and repoint brick masonry
   - Remove paint from cast stone window sills
   - Clean stains from brick masonry as required

    - Refer to NPS Preservation Brief #1 – Assessing Cleaning and Water-Repellant Treatments for Historic Masonry Buildings
    - Application of waterproofing to masonry should not be considered except for specifically approved areas
  - Replace deteriorated mortar as required
    - Mortar to match original for color, strength and joint profile
    - Refer to NPS Preservation Brief #2 – Repointing Mortar Joints in Historic Masonry Buildings
4. **Exterior Woodwork**. Restore all historic wood trim and features
  - Remove all deteriorated paint to sound substrate
  - Repair /replace deteriorated wood
    - Epoxy consolidation where feasible
    - Replacements in-kind permitted
    - Evaluate all wood details for maintenance (i.e., horizontal battens at portico entablature)
    - Apply primer and finish paint coats (gloss)

**Structural Systems**

1. **Floor Structure**
  - Rebuild infill framing for removed spiral stair at balcony floor structure
    - Framing should be reworked to meet the existing floor loading capacity of the balcony per Code requirements
2. **Exterior Walls**
  - Replace missing gutters
    - Eliminate water accumulation on brick exterior walls and foundation
  - Pipe downspouts away from base of building
    - Prevent hydrostatic pressure build-up behind foundation walls
    - Prevent erosion of bricks and mortar
3. **Interior Walls**
  - Repair or replace weakened or failed wood framing members damaged by prolonged exposure to moisture
    - Rebuild deteriorated wood partition wall in basement if required
    - Wood in contact with masonry or concrete shall be pressure treated

**Building Systems**

1. **HVAC System**
  - Completely re-pipe the boiler room
    - Re-pipe steam and condensate return piping
    - Replace the condensate receiver
  - Consider converting to hot water heat
    - Split system DX cooling
  - Upgrade controls
2. **Plumbing System**
  - Replace all plumbing piping and fixtures
  - Reuse existing electric water heater to provide domestic hot water
  - Provide a fire sprinkler system if required by Code
    - Note: Refer to Building Code evaluation. Sprinkler system may not be required.
3. **Electrical System**
  - Provide all new electrical service and distribution system
    - Capacity to provide for outlets to support classroom and office use
    - Capacity to provide for The Loft and studio areas

- Provide a complete fire alarm system
- Install period-appropriate light fixtures throughout

**Interior Rehabilitation**

The following scope of work would be in addition to or in combination with the work items listed under Critical Maintenance. This work would restore the building to a well-maintained condition, preserving historic materials and features as possible. However, the work described in this section does not take into consideration Building Code and Accessibility requirements. Those requirements are discussed on the previous section under Building Code and are detailed on the accompanying floor plans.

1. **Interior Plaster.** Repair/replace deteriorated plaster at walls and ceilings.
   - Plaster repairs must be executed to existing maintain fire rating as allowed by Building Code or Rehab Code
     - Plaster assumed to be on wood lath throughout
     - Composition of plaster shall match historic mix
   - Match historic finish
     - Remove all inappropriate textured surfaces
     - Remove deteriorated paint layers
     - Document historic paint colors and match as appropriate
   - Refer to NPS Preservation Brief #21 – Repairing Historic Flat Plaster
2. **Interior Brick Walls.** Restore interior finish of exposed brick walls in gymnasium
   - Clean brick as required
     - Consider detergent cleaners initially
     - If washing with detergent is not effective, gentle abrasive methods may be considered
     - Testing required for specification
   - Make repairs to brickwork as required
     - Repoint any deteriorated mortar
     - Repair damaged areas
     - Repair to areas of wear not required
     - Test panels required for approval
   - Optional: Apply maintenance sealant equal to Stand Off™ Stain Barrier as manufactured by ProSoCo, Inc.
3. **Interior Woodwork.** Repair damaged original interior woodwork and trim
   - Replace woodwork or trim beyond repair to match original
   - Replace missing or inappropriate trim to match original
   - Re-anchor loose trim
   - Re-paint surfaces
     - Remove deteriorated paint finish to sound substrate
     - Make required surface repairs
     - Apply primer and finish coats
4. **Interior Doors.** Repair damaged original interior doors
   - Remove doors from frames
   - Repair structure by re-gluing and clamping
   - Re-paint surfaces
     - Remove deteriorated paint finish to sound substrate
     - Make required surface repairs
     - Apply primer and finish coats
   - Restore original hardware as permitted by Building or Rehab Code
     - Replace hardware with appropriate units if required
5. **Interior Flooring.** Restore original wood flooring surface as appropriate for use

- Remove non-historic vinyl flooring
  - Confirm if asbestos abatement required
- Repairs to wood flooring at First and Second Floors
  - Patch areas at balcony
- Refinish to match original finish
  - Clean and/or finish sand
  - Avoid drum sanding if possible
  - Apply gloss varnish per manufacturer
- Replace flooring at Ground Floor
  - Install carpet or vinyl flooring as appropriate for use

## COST ESTIMATE

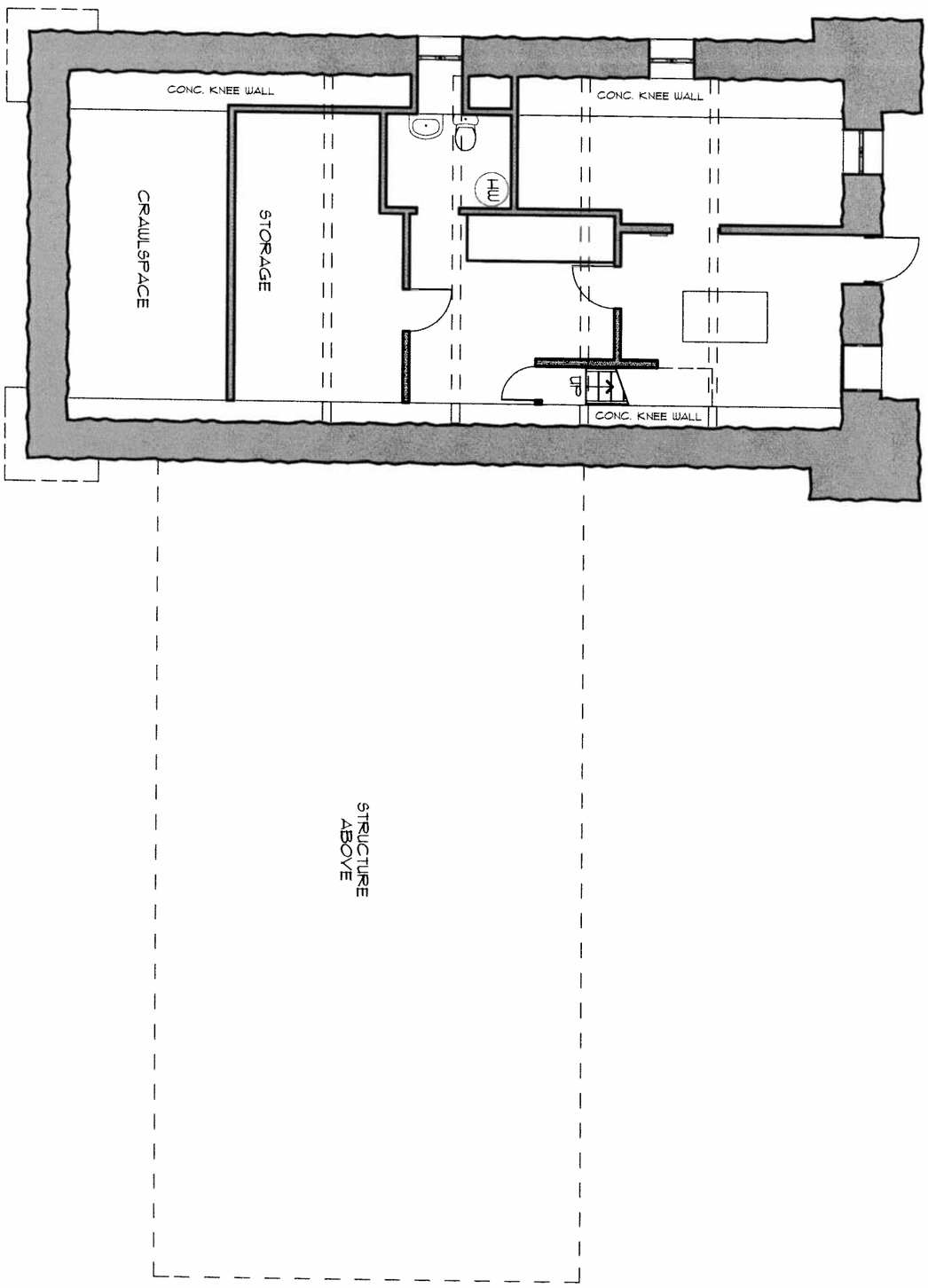
Based upon current market information, a statement of probable costs follows. Unit price figures are obtained from R. S. Means, 1st quarter 2006. Square foot costs for plumbing, mechanical and electrical systems are provided by Reece, Noland & McElrath, Inc. These costs do not include asbestos abatement or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total including Overhead & Profit |
|---|---|---|---|---|---|
| 01 General Conditions | Construction facilities, temporary equipment, administration, regulatory requirements | | | 10% | $88,093.00 |
| 02 Existing Conditions | Demolition of brick masonry for new openings | 200 | S.F. | 37.25 | $7,450.00 |
| | Demolition of existing walls at balcony | 439 | S.F. | 0.30 | $131.70 |
| | Demolition of stairs from gym floor to balcony | 15 | Riser | 8.15 | $122.25 |
| | Lead paint removal at cornice and soffit | 1,438 | S.F. | 5.45 | $7,837.10 |
| | Lead paint removal/prep multi-light steel windows | 714 | S.F. | 18.00 | $12,852.00 |
| | Lead paint removal/prep single-light wood windows | 955 | S.F. | 7.35 | $7,019.25 |
| 03 Concrete | Concrete footing for new stair and elevator shafts | 47 | L.F. | 21.50 | $1,010.50 |
| | Concrete ramp and landings | 305 | S.F. | 12.30 | $3,751.50 |
| | Concrete slab floor at new elevator landing | 25 | S.F. | 15.30 | $382.50 |
| | Stairs at new exit tower | 2 | Flight | 3,842.00 | $7,684.00 |
| 04 Masonry | Brick veneer at new stair and elevator shafts to match existing brick | 1,514 | S.F. | 9.15 | $13,853.10 |
| | CMU wall structure at new stair and elevator shafts | 2,609 | S.F. | 14.80 | $38,613.20 |
| | Pointing existing brick masonry, 5% of 15,138 SF | 757 | S.F. | 19.20 | $14,534.40 |
| 05 Metals | Balustrade at existing balcony rail | 190 | L.F. | 50.00 | $9,500.00 |
| | Railing at stairs, ramps | 198 | L.F. | 34.50 | $6,831.00 |
| 06 Wood | Metal stud partitions | 1,194 | S.F. | 4.55 | $5,432.70 |
| | Plywood sheathing at raised floor areas | 836 | S.F. | 1.65 | $1,379.40 |
| | Wood framing at Ground Floor Reception to raise floor | 475 | S.F. | 2.50 | $1,187.50 |
| | Wood framing to raise floor at balcony | 361 | L.F. | 1.80 | $649.80 |
| | Wood framing to repair balcony floor structure | 245 | S.F. | 13.60 | $3,332.00 |
| | Wood framing to repair/replace damaged roof rafters & sheathing | 150 | S.F. | 10.55 | $1,582.50 |
| 07 Thermal & Moisture Protection | Foundation waterproofing - install drainage around basement | 140 | L.F. | 7.45 | $1,043.00 |
| | Foundation waterproofing around basement | 560 | S.F. | 0.85 | $476.00 |
| | Roof - ice dam membrane at all valleys, ridges and eaves | 1,654 | S.F. | 1.10 | $1,819.40 |
| | Roof - shingles, asphalt, class A laminated | 7,584 | S.F. | 1.10 | $8,342.40 |
| | Roof deck insulation over gymnasium - 2-1/2" R-16.7 polyisocyanurate with 1/2" plywood sheathing | 5,554 | S.F. | 2.35 | $13,051.90 |
| | Roof drainage - reconnect downspouts to drains | 28 | Ea. | 6.55 | $183.40 |
| | Roof drainage - repair/replace gutters | 370 | S.F. | 3.80 | $1,406.00 |

## COST ESTIMATE

Based upon current market information, a statement of probable costs follows. Unit price figures are obtained from R. S. Means, 1st quarter 2006. Square foot costs for plumbing, mechanical and electrical systems are provided by Reece, Noland & McElrath, Inc. These costs do not include asbestos abatement or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total including Overhead & Profit |
|---|---|---|---|---|---|
| **08 Openings** | Doors - new interior doors | 11 | Ea. | 363.20 | $3,995.20 |
| | Doors - new interior fire-rated doors | 3 | Ea. | 774.50 | $2,323.50 |
| | Doors - restore existing exterior doors | 4 | Ea. | 790.00 | $3,160.00 |
| | Interior glazing at gymnasium | 144 | S.F. | 26.95 | $3,880.80 |
| | Storefront systems at accessible entrance, ground floor | 102 | S.F. | 22.00 | $2,244.00 |
| | Windows - new storm windows, interior magnetic | 1,669 | S.F. | 6.40 | $10,681.60 |
| **09 Finishes** | Carpet at raised floor areas | 93 | S.Y. | 45.65 | $4,245.45 |
| | Exterior painting - soffit & trim | 1,438 | S.F. | 1.90 | $2,732.20 |
| | Exterior painting - steel windows | 714 | S.F. | 3.70 | $2,641.80 |
| | Exterior painting - wood windows | 39 | Ea. | 30.50 | $1,189.50 |
| | Gypsum board, 5/8" fire resistant | 3,528 | S.F. | 4.25 | $14,994.00 |
| | Interior painting - ceiling in gymnasium (area x1.75) | 9,720 | S.F. | 0.25 | $2,430.00 |
| | Interior painting - ceilings | 19,167 | S.F. | 0.65 | $12,458.55 |
| | Interior painting - steel trusses in gymnasium | 2,028 | S.F. | 0.90 | $1,825.20 |
| | Interior painting - walls | 15,000 | S.F. | 0.55 | $8,250.00 |
| | Plaster - restore 2nd Floor ceilings, basement walls | 220 | S.Y. | 18.25 | $4,015.00 |
| | Wood flooring - patch hole where stair to balcony removed | 45 | S.F. | 8.55 | $384.75 |
| | Wood flooring - sanding & finishing | 8,731 | S.F. | 1.45 | $12,659.95 |
| **10 Specialties** | Toilet cubicles, floor mounted | 4 | Ea. | 725.00 | $2,900.00 |
| | Toilet cubicles, floor mounted, incl. 52" grab bars, for handicap units | 2 | Ea. | 335.50 | $671.00 |
| | Urinal screens | 2 | Ea. | 335.00 | $670.00 |
| **14 Conveying Equipment** | Elevator, hydraulic, 2500 lb passenger, 3 floors | 1 | Ea. | 63,320.00 | $63,320.00 |
| **22 Plumbing** | Add/relocate plumbing fixtures per plans | 13 | Ea. | 1,375.00 | $17,875.00 |
| **23 HVAC** | Rework/replace piping, new boiler, new DX units | 16,612 | S.F. | 18.70 | $310,644.40 |
| **26 Electrical** | Install new electrical wiring, lighting fixtures | 16,612 | S.F. | 13.20 | $219,278.40 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | | | **$969,021.80** |
| | Architectural & Engineering Fees | | | 9% | $ 87,212.00 |
| | Contingency | | | 20% | $211,247.00 |
| **TOTAL PROJECT COST** | | 16,612 | S.F. | $76.30 | **$1,267,480.80** |




EXISTING BASEMENT PLAN

SCALE: 1/8" = 1'-0"

N

# MONTAGUE HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

EXISTING BASEMENT PLAN

Date: March 2006

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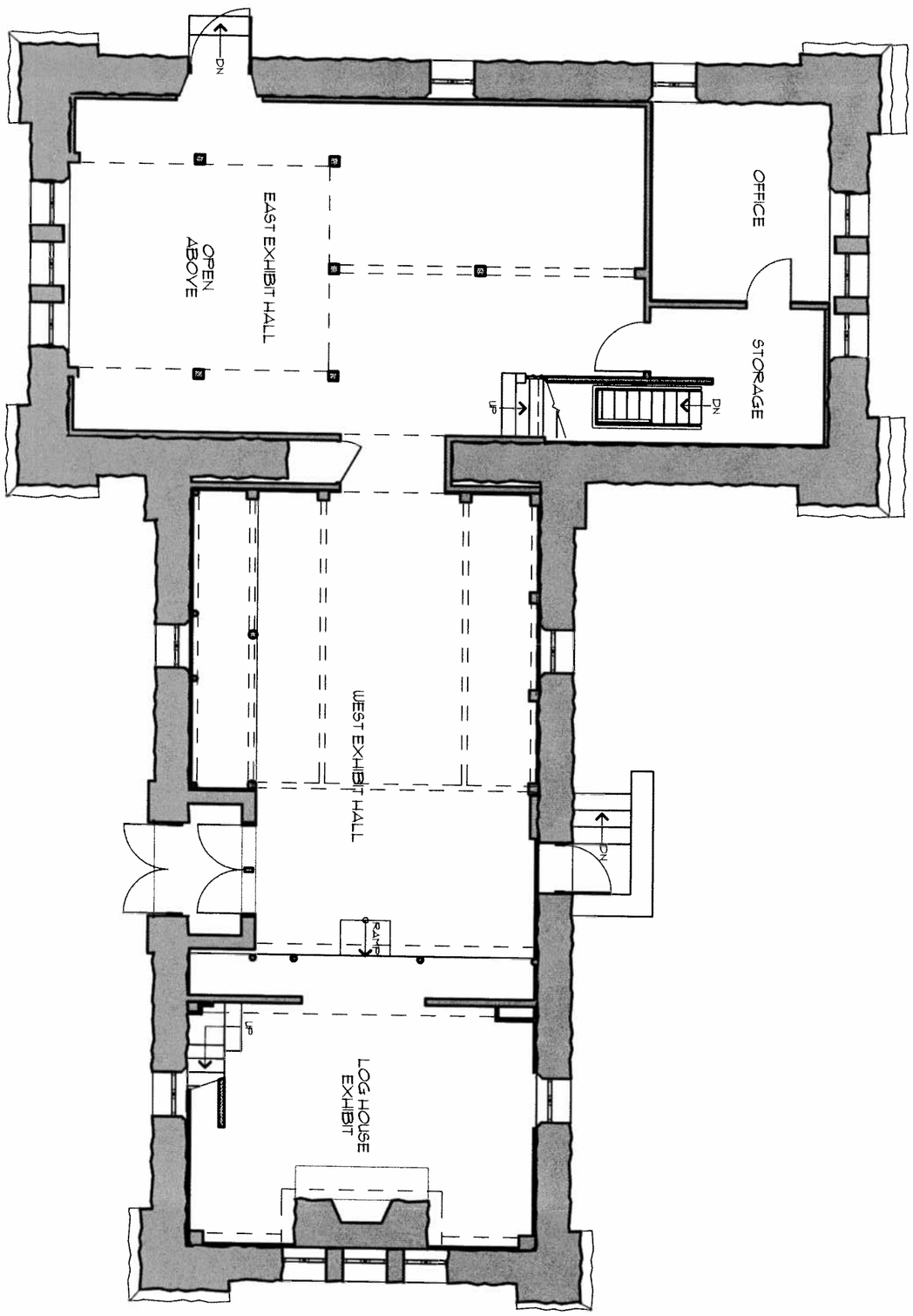


EXISTING
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

N

# MONTAGUE HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING FIRST FLOOR PLAN

Page 2 of 3

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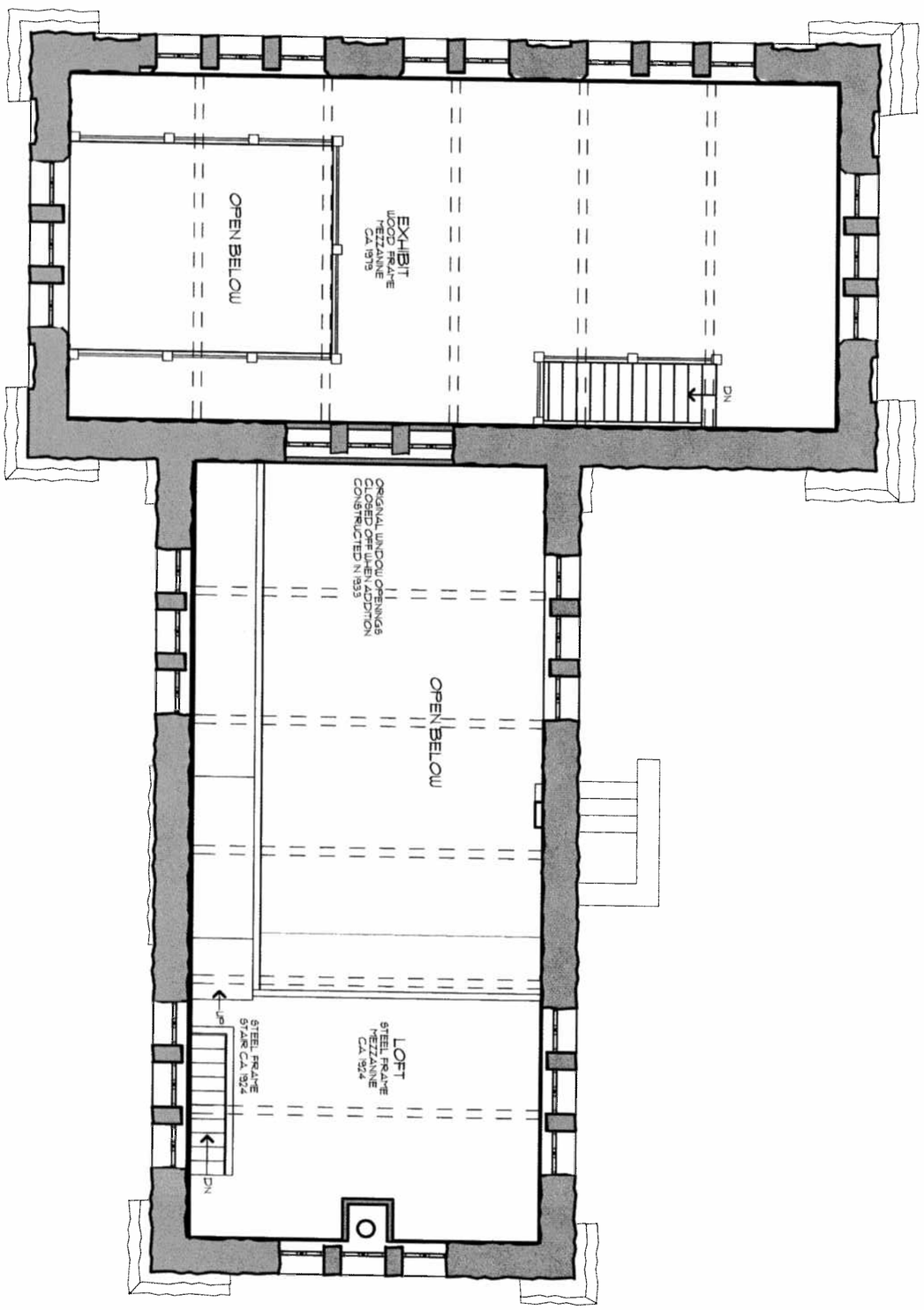


EXISTING
MEZZANINE PLAN
SCALE: 1/8" = 1'-0"

N

# MONTAGUE HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
MEZZANINE
PLAN

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RESTORE ORIGINAL DOOR
REMOVE EXISTING DOOR WELL; CONSTRUCT NEW CONCRETE SLAB @ 6" BELOW FLOOR LEVEL WITH DRAIN
ABATE ASBESTOS
REMOVE BOILER
FILL PIT WITH CONCRETE
BOILER
MECHANICAL & STORAGE
CONCRETE KNEE WALL
CONCRETE KNEE WALL
UP
REMOVE EXISTING PLUMBING FIXTURES
HW
CONFIRM FEATURE AND REMOVE IF NOT REQUIRED
STEEL BEAM ABOVE
STORAGE
CRAWLSPACE
EXISTING CONCRETE MECHANICAL TRENCH @ 36" BELOW GRADE - PROVIDE DRAINAGE AS REQUIRED
STRUCTURE ABOVE
EXISTING CONCRETE MECHANICAL TRENCH @ 36" BELOW GRADE - PROVIDE DRAINAGE AS REQUIRED

# PROPOSED BASEMENT PLAN

SCALE: 1/8" = 1'-0"

N

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MONTAGUE HALL
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED BASEMENT PLAN

PROPOSED
FIRST FLOOR PLAN
SCALE: 1/8" = 1'-0"

N

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# MONTAGUE HALL
## PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
FIRST
FLOOR
PLAN

DN
RECONSTRUCT BALUSTRADE TO MEET CODE
EXHIBIT
WOOD FRAME MEZZANINE CA 1979
RECONSTRUCT BALUSTRADE TO MEET CODE
OPEN TO BELOW
CLOSE OFF SECTIONS OF BALCONY TO REDUCE AREA OF MEZZANINE TO CODE DEFINED 1/3 OF MAIN FLOOR AREA
OPTIONAL:
RESTORE ORIGINAL WINDOW OPENINGS TO CREATE VISUAL CONNECTION BETWEEN EXHIBIT MEZZANINE AND WEST EXHIBIT HALL
OPEN BELOW
EXISTING BALCONY
LOFT
STEEL FRAME MEZZANINE CA. 1930'S
STEEL FRAME STAIR CA. 1930'S
UP
DN

PROPOSED
MEZZANINE PLAN
SCALE: 1/8" = 1'-0"

N

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MONTAGUE HALL
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
MEZZANINE
PLAN

# MONTAGUE HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

*(Mars Hill College Quarterly, May 1924)*


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1 HISTORIC CERTIFICATION

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PROPOSED PLANS

# MONTAGUE HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

## GENERAL INFORMATION

| | |
|---|---|
| **Year Built** | 1918 as Estella Nissen Montague Library. East wing added in 1930s. |
| **Style** | Rustic |
| **Architect** | C. Gilbert Humphries, Winston-Salem, NC |
| **Builder** | Alfred Sprinkle |
| **Original Use** | Library |
| **Current Use** | Rural Life Museum |
| **Proposed Use** | Rural Life Museum; Madison County Visitor's Center |
| **Building Area** | Basement: 745 SF<br>Main Floor: 1,955 SF<br>Mezzanine: 1,177 SF<br>Total: 3,877 SF gross (not including exterior walls) |

## HISTORIC SIGNIFICANCE

Erected as the college library, this expressive stone building was funded in part by Col. Henry Montague of Winston-Salem in honor of his wife. The college matched Montgue's donation with local labor and local stone, hauled by wagon from Sprinkle's farm in the California Creek area . A matching east wing set perpendicular to the original building was erected in 1933. The building served as the college library until 1955 when a larger facility was constructed. It became the home of the Rural Life Museum in 1979.

## HISTORIC CERTIFICATION

Contributing building, proposed Mars Hill College Historic District, National Register of Historic Places

## ARCHITECTURAL SIGNIFICANCE

Constructed in a rustic style, Montague Library exhibits Craftsman-style overtones. The building was a striking departure from the red brick buildings that had been erected on campus and was unique until construction of the nearby W. F. Robinson Infirmary in 1935. The building has had no significant permanent alterations made to it since the construction of the east addition in 1933, and retains much of its historic architectural character *(Figure 1)*.

Figure 1: Montague Library from the quadrangle.

**Exterior**

Building massing and proportions
Irregular stonework with recessed mortar joints
Steel windows
Paneled wood doors with wrought iron straps hinges, hardware
Carved granite lintel and plaques at front entrance

**Interior**

Plaster finish on walls, beams and ceilings
Two-story space
Paneled doors with double-acting hinges and marble threshold
Historic steel framed mezzanine

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These have been placed in chronological order. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available.

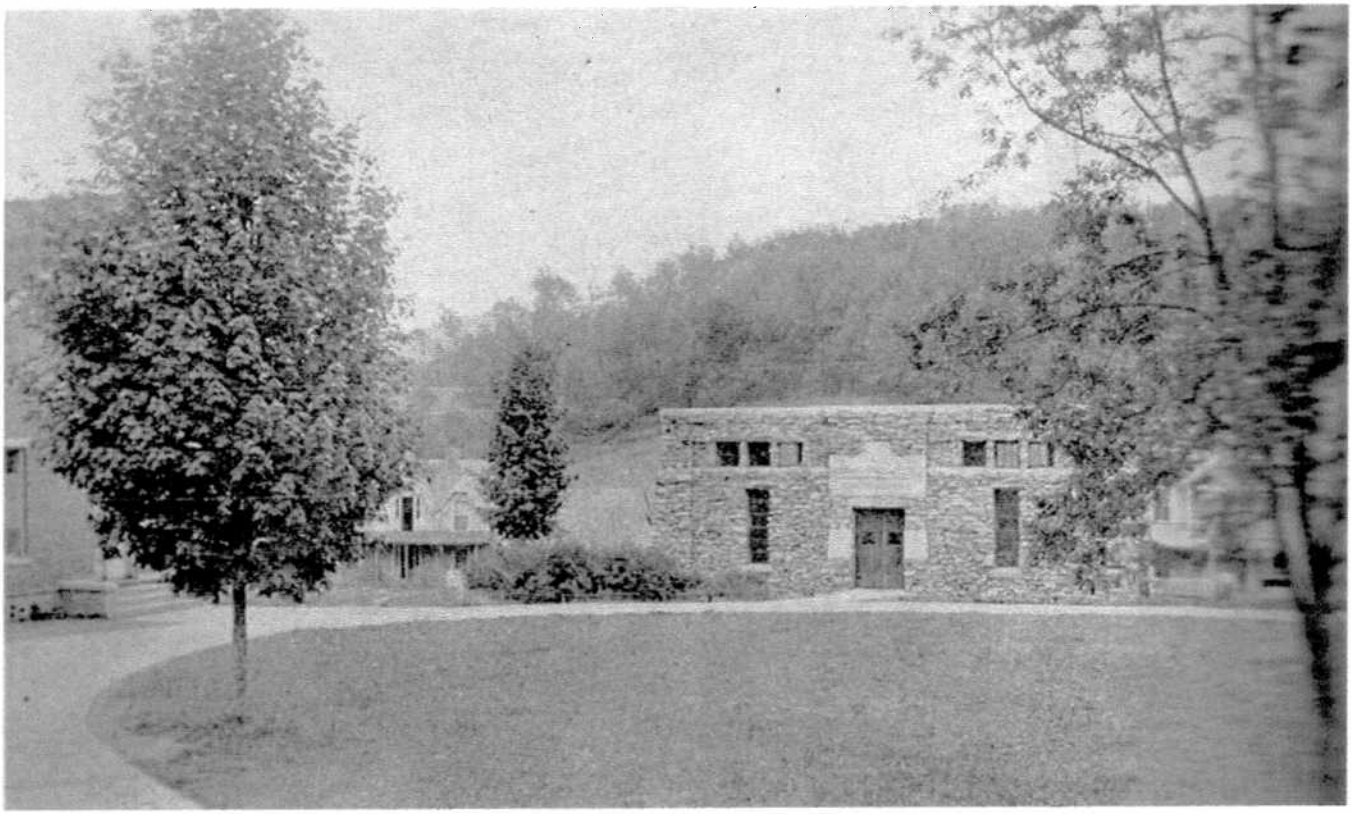


Image 1. 1922. *(Mars Hill College Quarterly, June 1922, before p. 25)*

Image 2. 1924, "Corner of Montague Library." *(Mars Hill College Quarterly, May 1924, after p. 15.)*

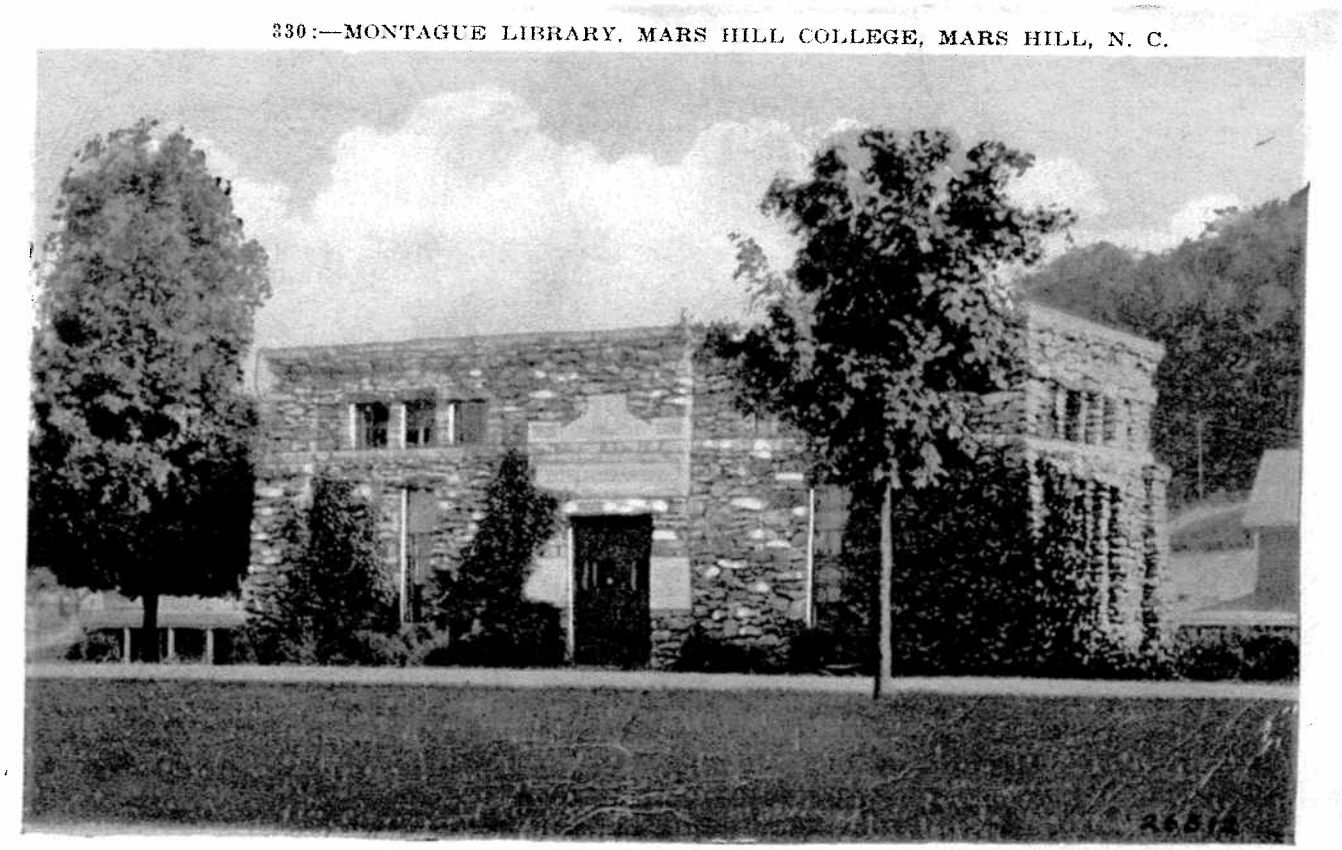



Image 3. Postcard view of original building, prior to 1930. *(MHC)*

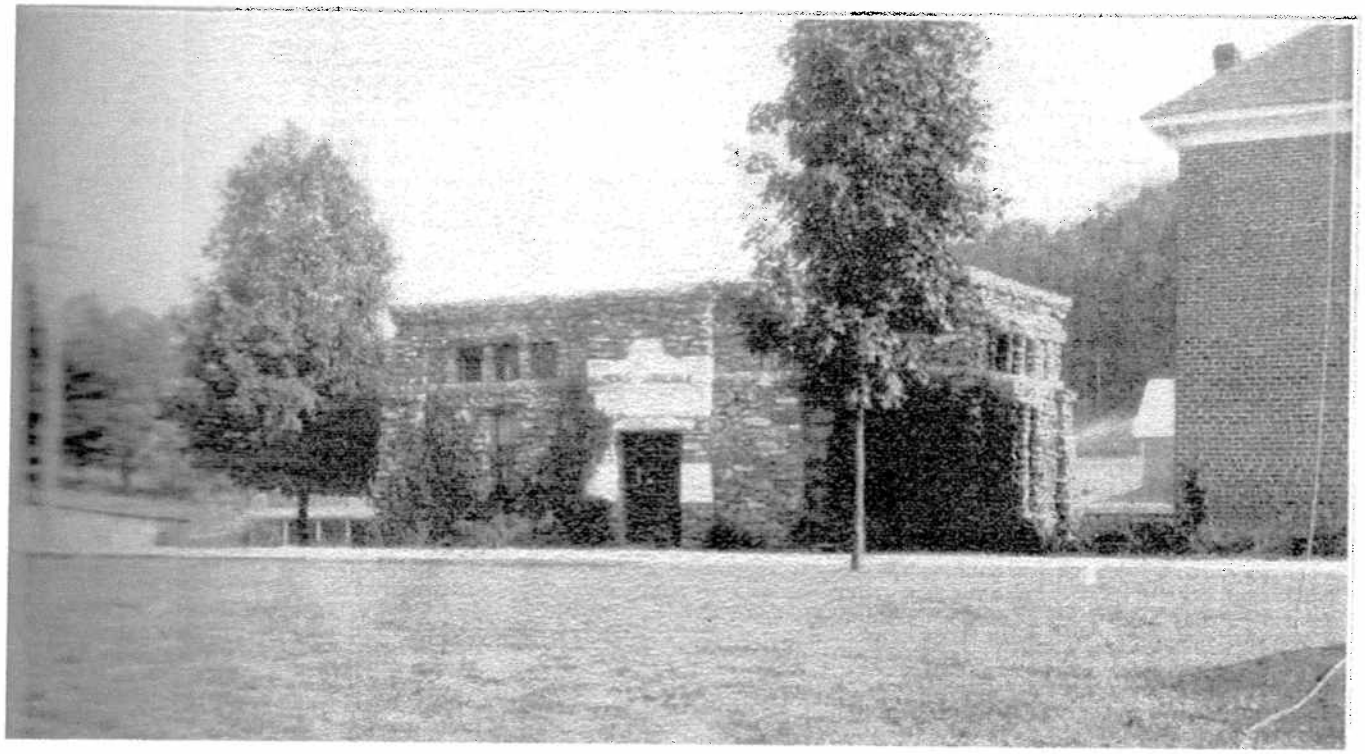


Image 4. 1928, Montague Library. *(The Laurel 1928)*

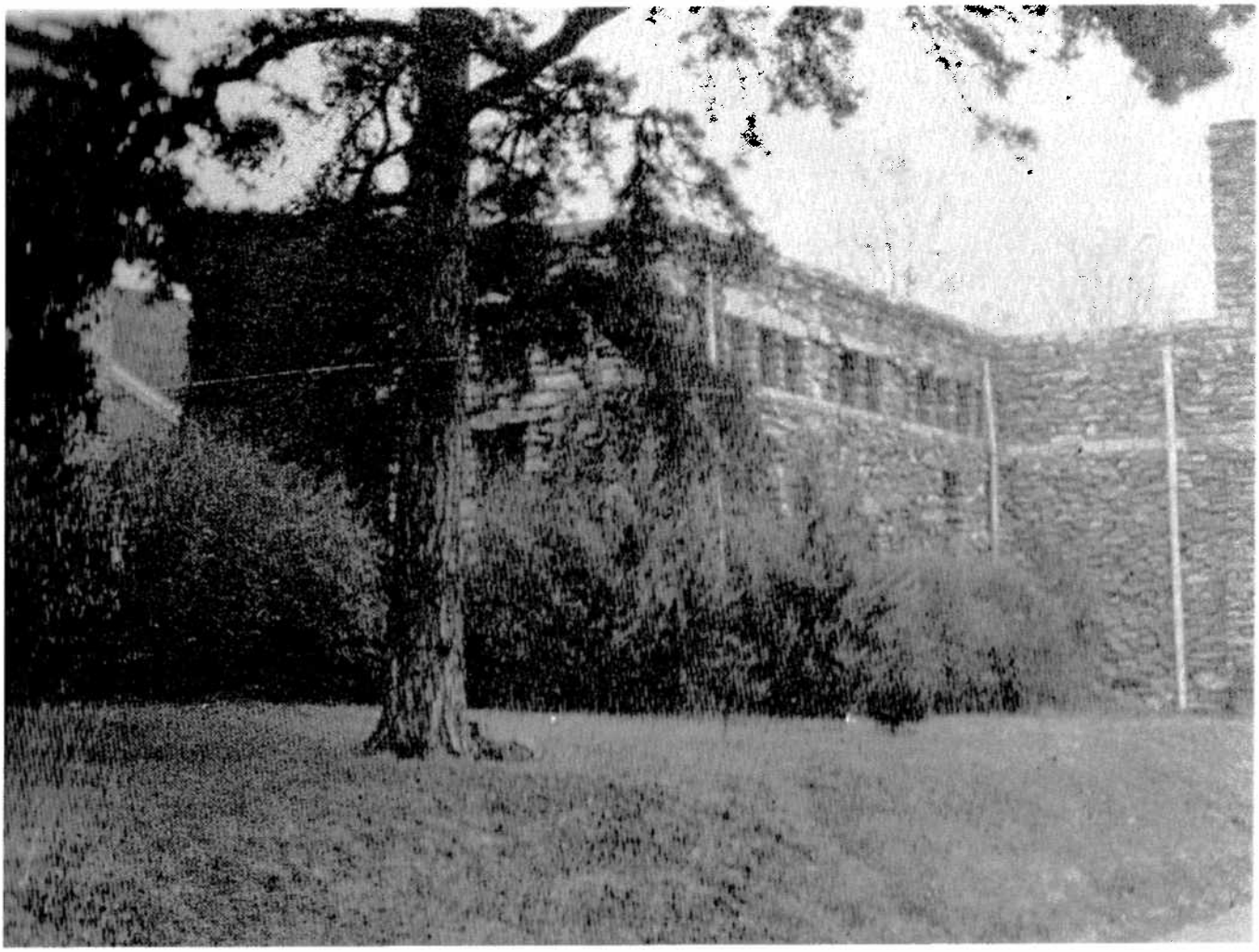


Image 5. 1936, view of the southwest corner. *(Mars Hill College Quarterly, March 36, before p.49.)*

Image 6. 1936, "A Corner of the Reading Room." *(Mars Hill College Quarterly, March 36, before p.49)*. This room is in the 1933 east wing addition. In the bottom left of the photo note the pipe railing at the narrow stair leading to the basement where the bathrooms were located. The window in the upper center of the photo was later replaced with a paneled door matching the front doors.

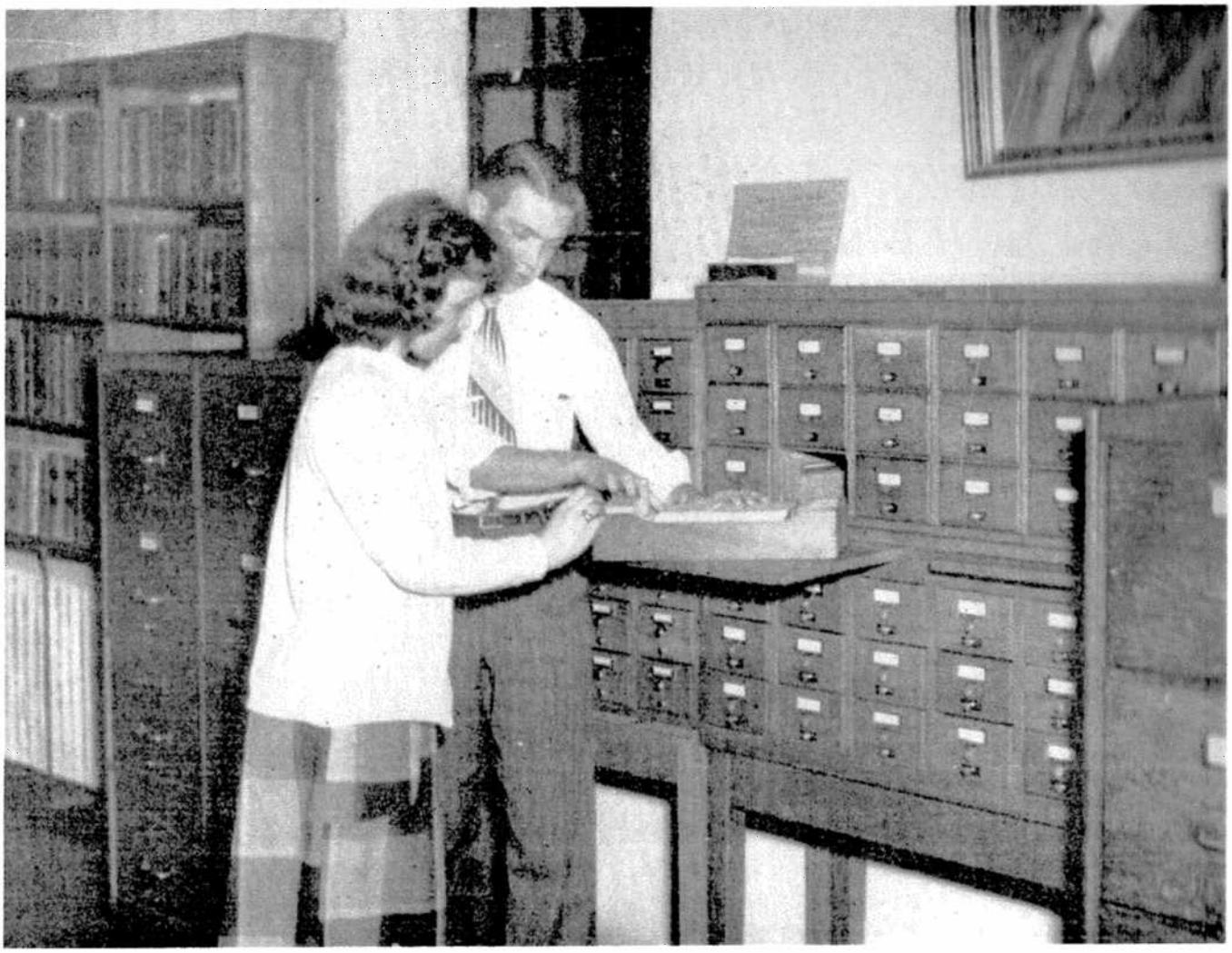


Image 7. 1951, "In the Library." *(Mars Hill College Quarterly, March 1951.)*

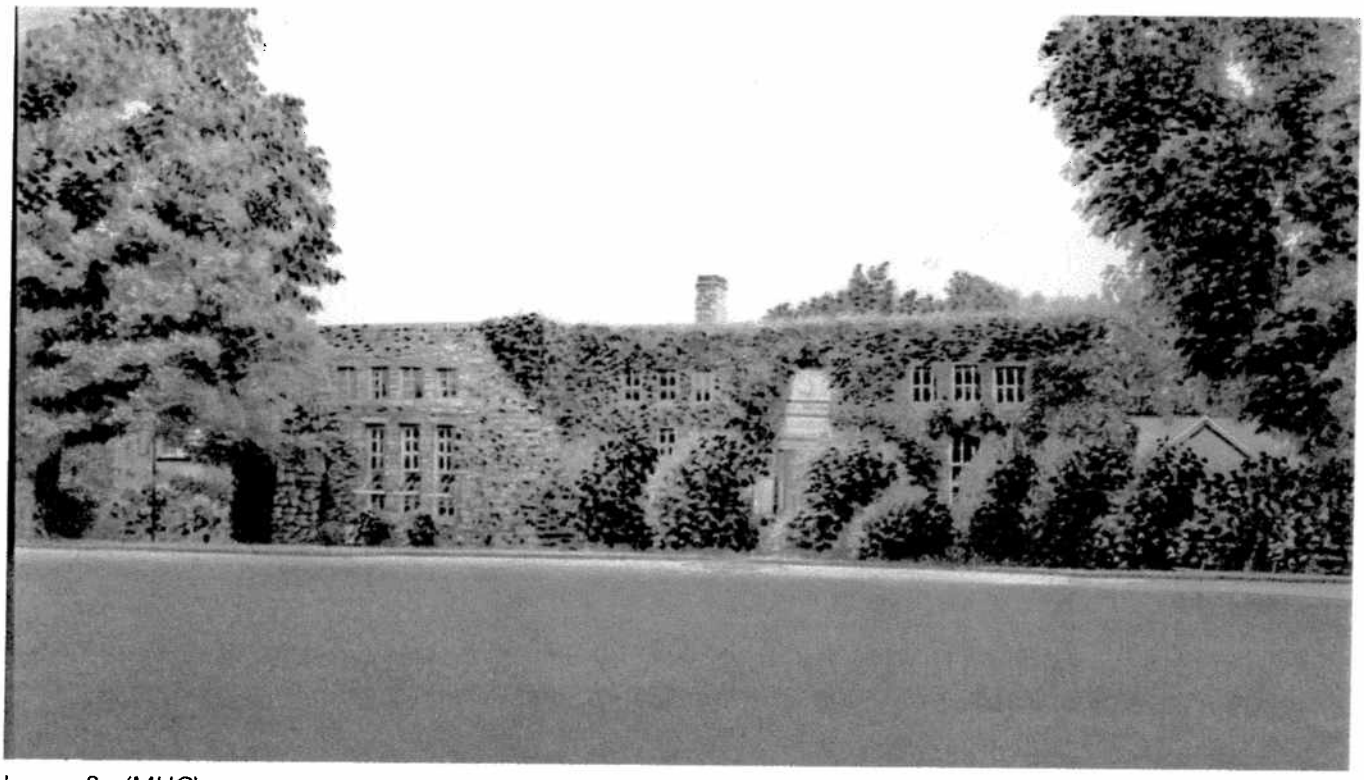


Image 8. *(MHC)*

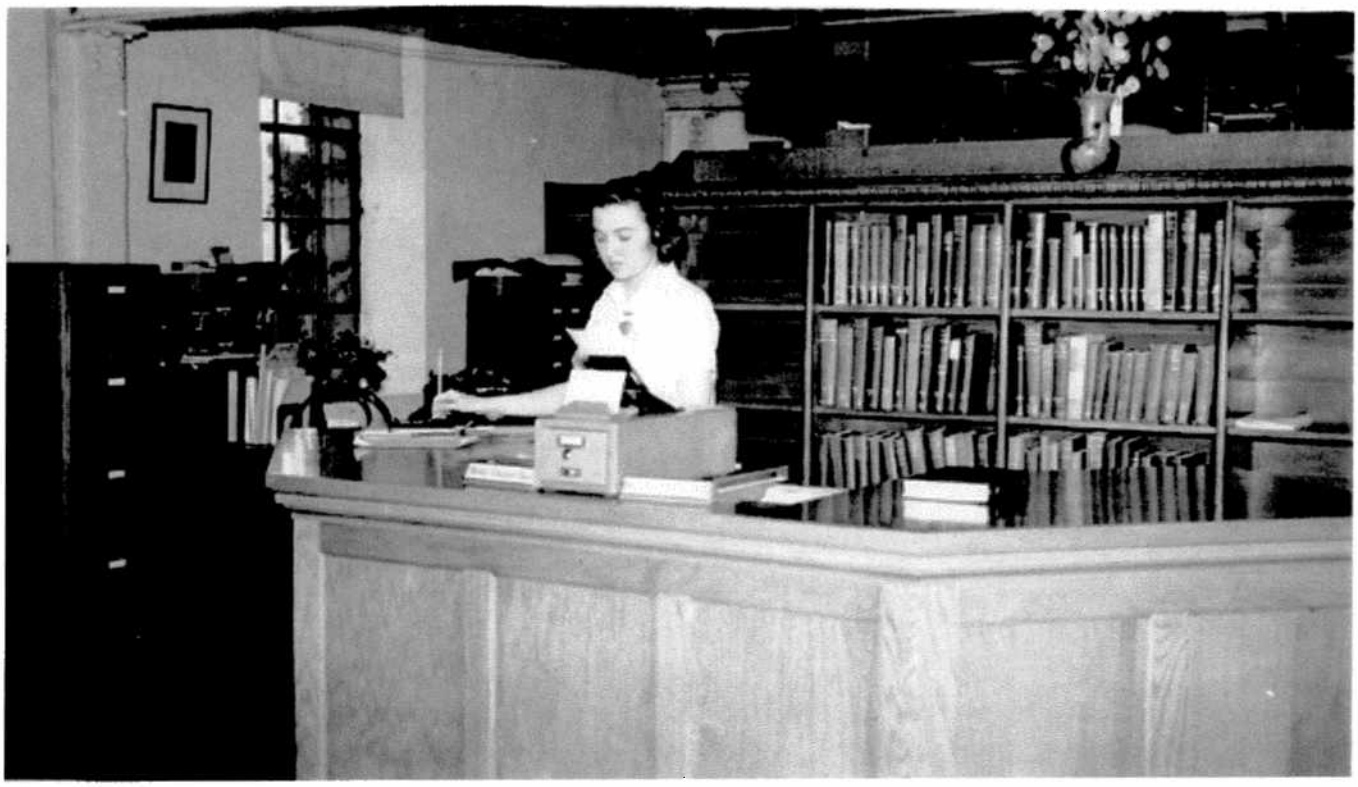


Image 9. Interior of first floor looking west at main desk. *(MHC 773)*

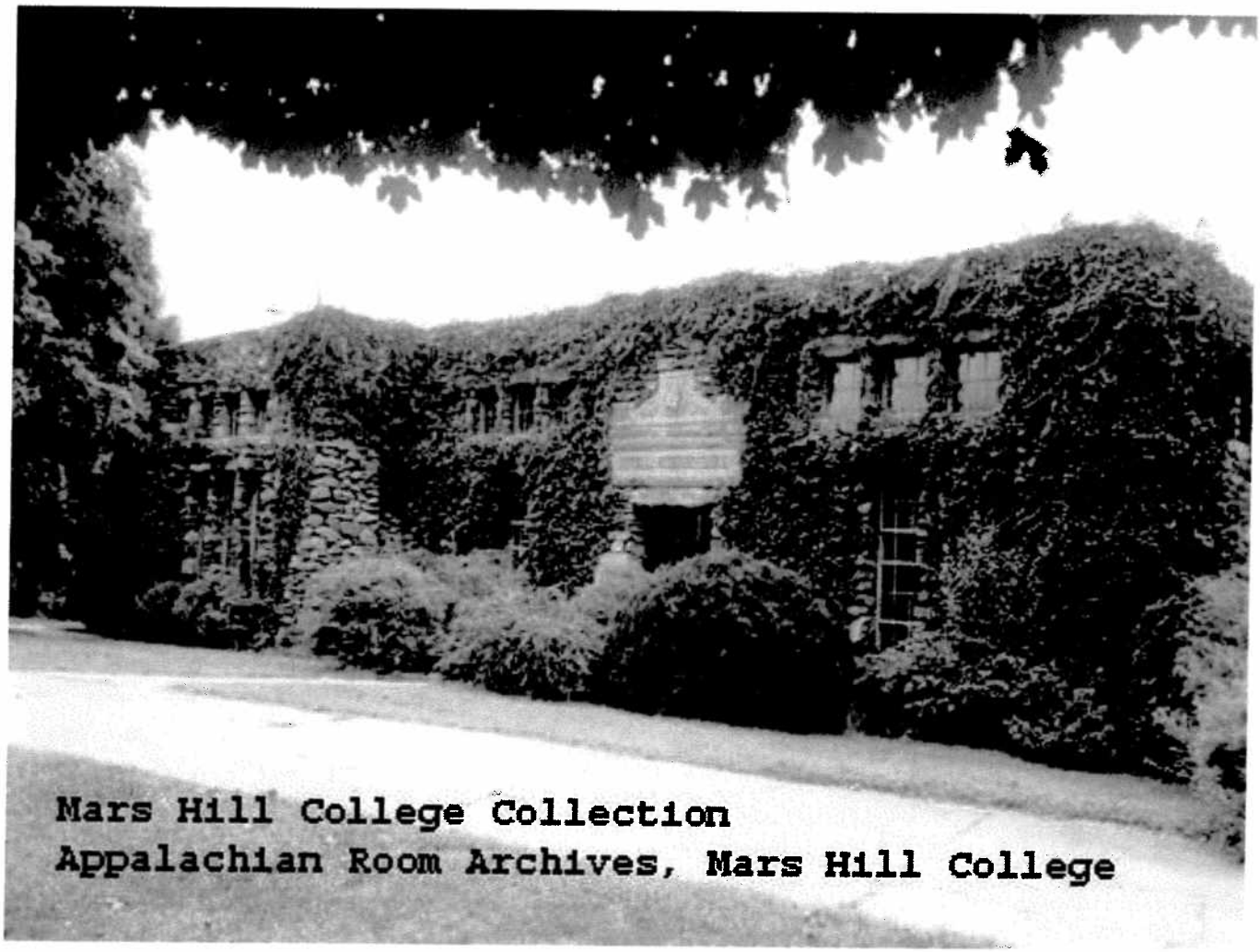



Image 10. *(MHC)* Ivy was removed in the 1990's.

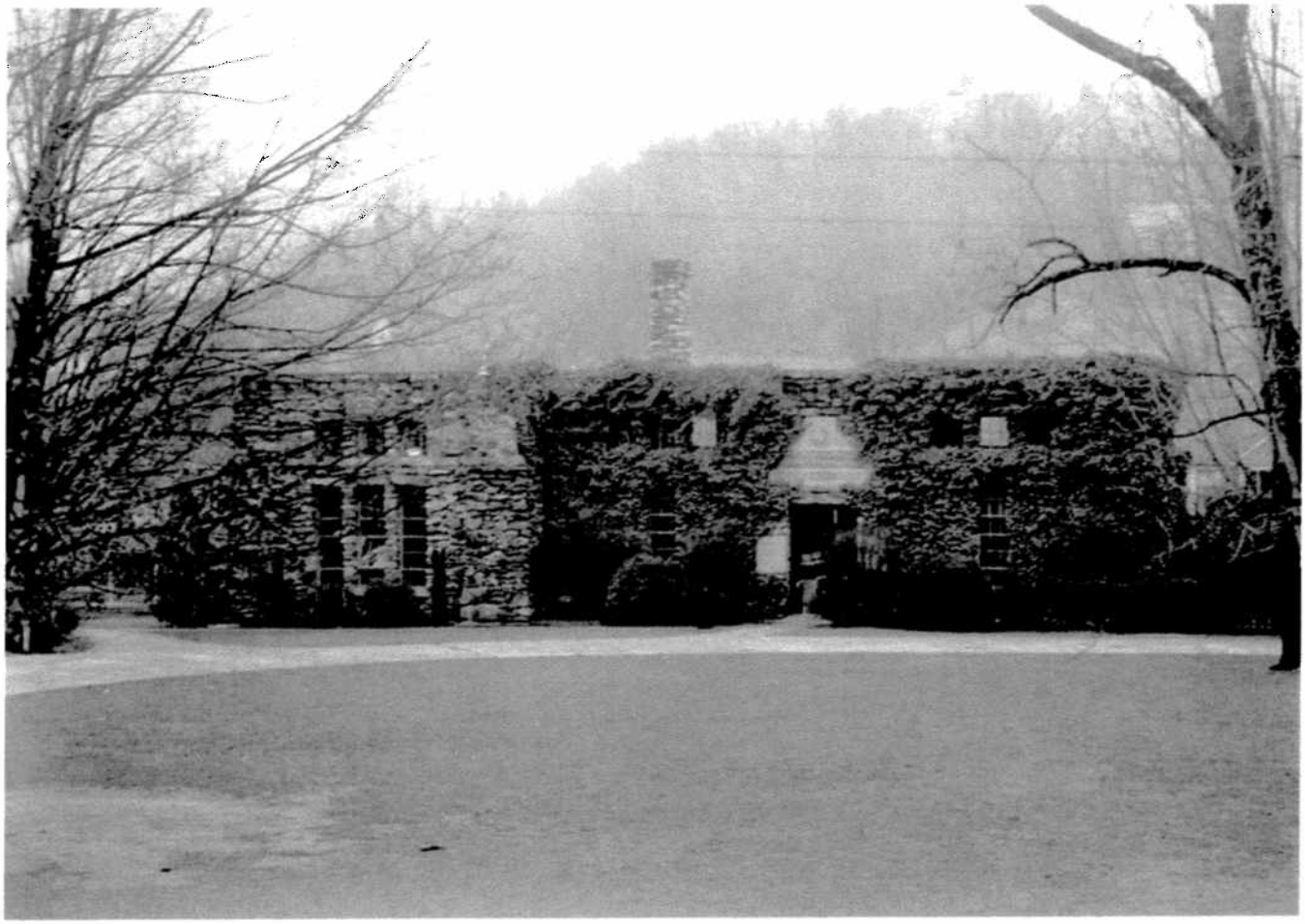


Image 11. *(MHC 221)*

## ARCHITECTURAL DESCRIPTION

### Exterior

The building's walls are constructed of local stone, set in a random pattern with recessed mortar joints to give the impression of dry laid work. The corners of the building are battered while the upper section of the building is set back above a continuous cut stone watertable. The massive stone walls corbel out at the parapet and are capped with a cut stone coping.

Figure 2: Front entrance with granite plaques.

The main entrance extends to the roof parapet with the stonework broken by a massive lintel of granite and decorative plaques above and to the sides *(Figure 2)*. The main lintel is carved with the name "ESTELLA NISSEN MONTAGUE" and a carved granite plaque flanks the sides of the doorway. The right side reads "IGNORANCE IS THE CURSE OF GOD, KNOWLEDGE THE WING WHEREWITH WE FLY TO HEAVEN" and the left reads "AFFECTIONATELY DEDICATED TO HIS DEVOTED WIFE BY H. MONTAGUE A.D. 1918." A polygonal plaque set above the lintel is carved with an open book set in an olive wreath border with two small rosettes in the upper corners.

The original windows are steel frame and sash, set directly into the stonework. The tall lower windows have two operable center-pivot sashes while several of the upper square windows also operate on a center-pivot. All of the window lights are a vertical 2:3 proportion.

When the east wing addition was constructed in 1933, the three tall lower windows at the east end of the original building were removed to create a large opening between the rooms. The square upper window openings were filled in and plastered over. It has not been verified whether the window sash are still in place.

Figure 3: Windows in east wing, looking north.

The flat roof is not visible, but slopes from north to south with scuppers draining to downspouts on the south wall.

### Interior

The interior is detailed fairly plainly throughout, with no outstanding architectural detailing. The character of the interior is composed primarily of the proportions and volume of the plastered space, the deeply recessed windows *(Figure 3)* and the ceiling beams. The ceiling slopes slightly from 18 feet to almost 19 feet in height.

To create a separate card catalogue area, a steel-framed mezzanine was added to the original west wing in 1924.[1] Another mezzanine of wood frame construction was added to the east wing addition in 1979 to provide additional floor space for the Rural Life Museum. The original steel-framed mezzanine and stair were clad over in wood to match the added work and appear to survive intact. Existing interior frame partitions date from 1955 when the library was moved to the newly completed Memorial Library.

## ARCHITECTURAL CONDITION ASSESSMENT

Figure 4: Ivy roots embedded in mortar joints on the east wall.

### Exterior Stone Masonry

The stonework is the building's most important visual characteristic. The stone itself appears to be in good condition; however, the mortar joints in many areas have deteriorated, allowing water to enter the building. The dry-laid appearance of such stonework required great skill and care of the original mason to properly slope each stone away from the wall and allow for drainage. Any stone that was laid with a slope toward the wall would eventually create a waterproofing issue as cracks developed in the mortar.

For many years, the building was allowed to be covered in English ivy *(Image 10)*. While the ivy imparted a certain romantic appeal to the building, its long-term presence has led to deterioration of the mortar joints. The ivy was removed in recent years; however, large ivy roots have embedded themselves in the mortar and will be difficult to remove without damage to the joints *(Figure 4)*. There are areas where ivy and other plant material are re-sprouting.

The projecting cut stone watertable along the upper window sill line presents a difficult waterproofing issue. There is evidence of recent repointing of the mortar joints along this sill. However, moisture may still be migrating through this highly exposed area.

The cut stone parapet coping similarly creates a potential waterproofing issue, and relies heavily on the integrity of the individual mortar joints. It appears that sections of the coping have been repointed in the past and that a mortar wash has been applied to the top.

### Roof

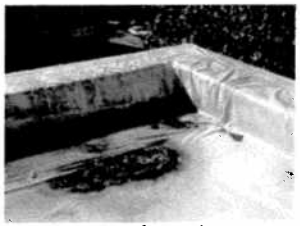


Figure 5: Roof membrane at parapet.

The original roof was probably a traditional built-up tar and gravel system. The current roof is a mechanically-fastened "Duro-Last" PVC single-ply membrane that was installed in 2001. The roof installation included wrapping the membrane up the sides and onto the top of the parapet *(Figure 5)*. It is assumed that the new roof membrane has eliminated water infiltration through the roof deck. However, there are several problematic roofing issues that need to be addressed.

The roof membrane installation is substandard. The membrane appears to have been installed without adequate seams at the edge of the roof deck, the installer preferring to lay a continuous membrane up and over the parapet. This did not allow the membrane to be properly fitted to the roof deck and therefore it exhibits extensive wrinkling and puckering throughout. Many areas on the roof deck exhibit water ponding. The termination detail at the parapet relies only on a sloppily applied bead of sealant at the outer edge. This detail does not appear to be a manufacturer-approved termination method, and eventual failure of the sealant will allow water to penetrate under the membrane.

There are two existing roof drains in the west wing, but only one drain in the east wing. The undersized 4" diameter drains penetrate horizontally through the parapet walls and are fitted directly to 4" diameter PVC pipe which turn down the side of the building or into existing galvanized steel downspouts. This detail does not allow for overflow drainage from the roof, and permits debris to clog up the drains.

### Windows

The steel windows are an important architectural feature of the building *(Figure 6)*. Every effort should be made to preserve and restore the original windows.

The steel windows exhibit surface rusting and failed glazing putty in many areas. The level of deterioration appears to be largely cosmetic, and it is assumed that the windows can be restored. The operability of the windows is not known; however it can

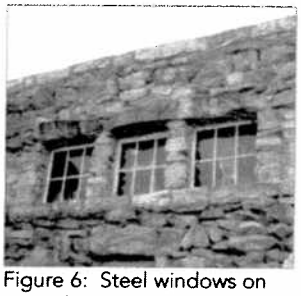


Figure 6: Steel windows on south facade.

be assumed that most of the windows have not been opened in many years. Ill-fitting sash due to warping or paint build up may be allowing uncontrolled air infiltration. Steel windows unfortunately have a high thermal conductivity, which allows for significant transfer of heat from the interior in the winter.

**Interior Floor Plan**

The plan of the original building and the similarly sized later east wing total approximately 1,955 square feet gross. The building's interior was originally open two-story space, divided only by book stacks. When the east wing was added, a steel framed mezzanine was constructed at the west end of the west wing. When the Rural Life Museum took over the building in 1979, a wood frame mezzanine structure was constructed in the east wing, adding approximately 747 square feet of exhibit space. The mezzanine area in the original west block is virtually inaccessible due to the narrow width of the stairway, and is only used for staff workspace and storage.

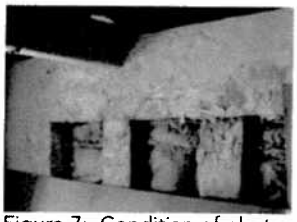


Figure 7: Condition of plaster around windows on east wall.

The basement floor appears to have always been subdivided as utility /storage /mechanical space and is mostly unfinished. A very narrow stairway – 24" wide – leads down from the main floor.

**Flooring**

The original flooring material appears to be the existing scored and stained concrete, visible in the west wing of the building. In the later east wing, the flooring is currently carpet. It is assumed that the similar concrete flooring is underneath. Where it can be inspected, the condition of the concrete flooring appears to be fair.

Figure 8: Interior of door at front entrance. Note early closer.

**Walls and Ceilings**

All original walls are plaster on hollow clay tile. All ceilings are plaster on the concrete roof slab. There is no interior window or door trim.

The plaster has suffered extensive damage throughout due to water infiltration from the roof as well as from exterior walls. Substantial areas show efflorescence, with delamination occurring in many places. Damage is especially evident around the windows (*Figure 7*).

**Doors and Woodwork**

The original front entrance doors are still in service and in fair condition overall. The door in the east wing addition was originally a window, as seen in a 1936 photograph (*Image 6*). Both this and the south entrance doors are quite weathered. The doors are of oak, laminated construction, with v-jointed vertical tongue-and-groove boards on both sides of a solid core. Wrought iron strap hinges with a fleur-de-lis pattern support the doors on pintles (*Figure 8*). The interior entry doors boast double-acting hinges. Exterior doors have original or early hydraulic closers. All exterior doors are at least 34" wide, and therefore should be able to meet accessibility requirements with minimum adjustments.

**Hazardous Materials**

The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and boiler. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical ceiling tiles, plaster and gypsum wall board joint compound. Mold can be present wherever water damage to absorbent materials has occurred.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant.

## CURRENT PHOTOGRAPHS

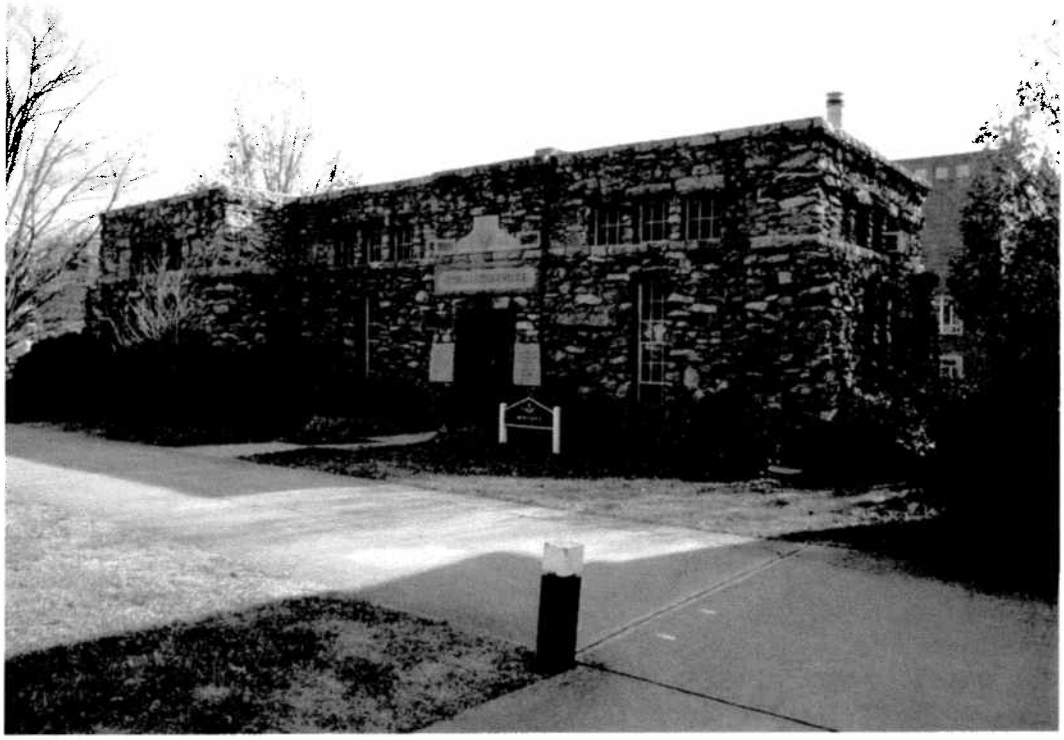


Photo 1. North view from quad.

Photo 2. East facade. Steps to side door would be replaced with accessible ramp and landing.

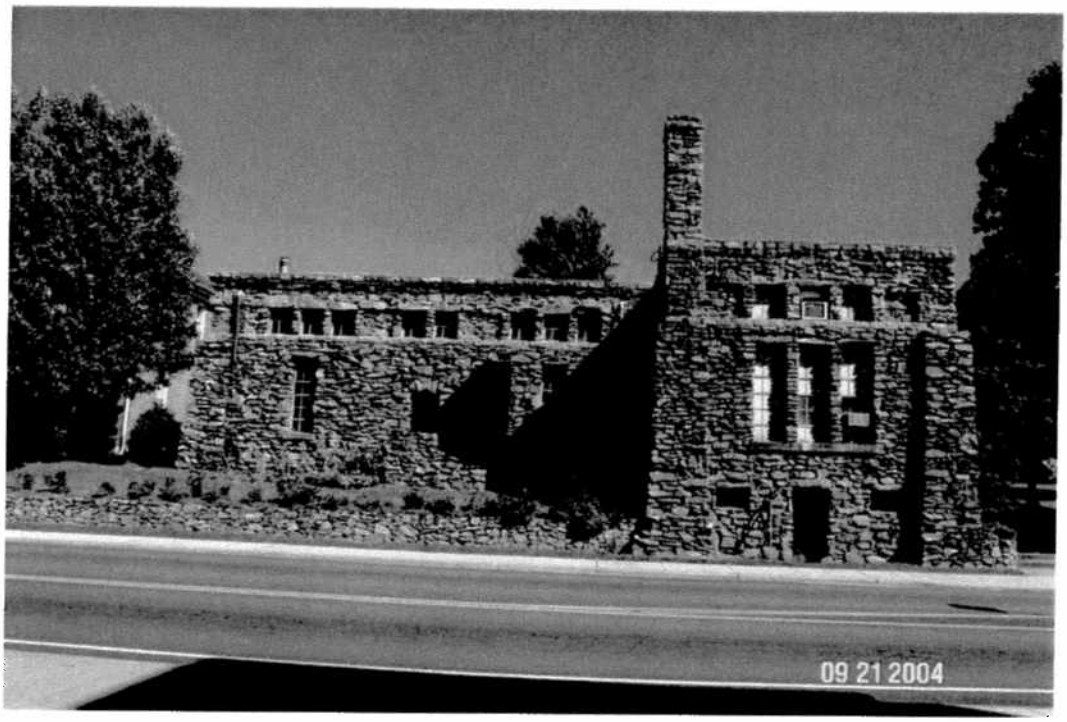



Photo 3. South facade.

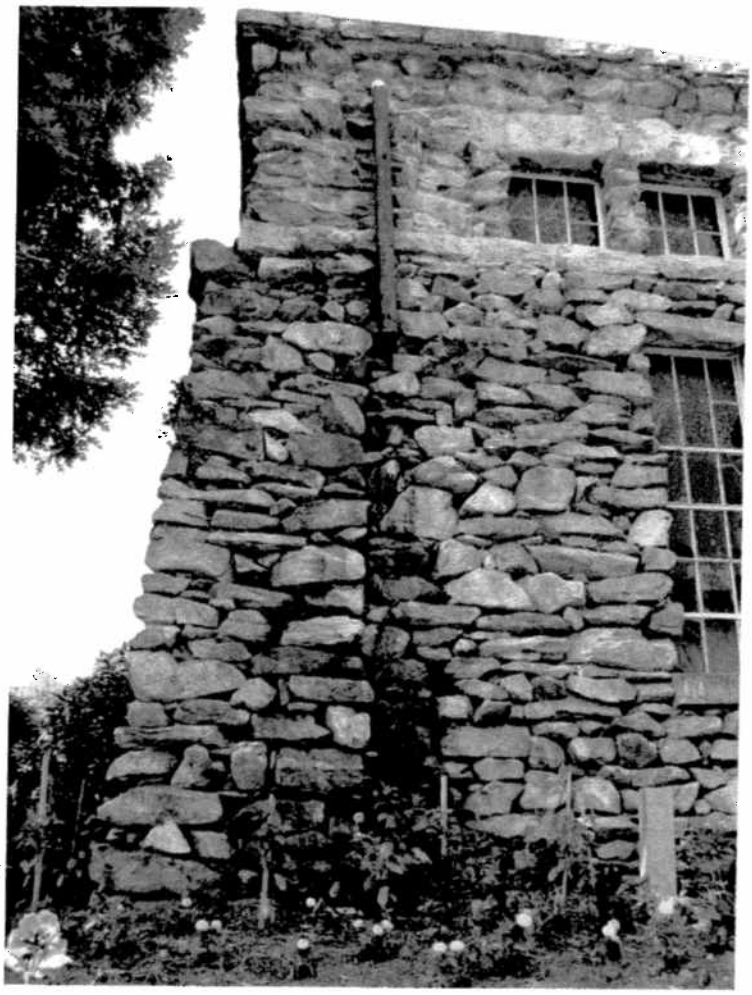


Photo 4. Detail of downspout condition at NW corner. Note moisture damage and plant growth.

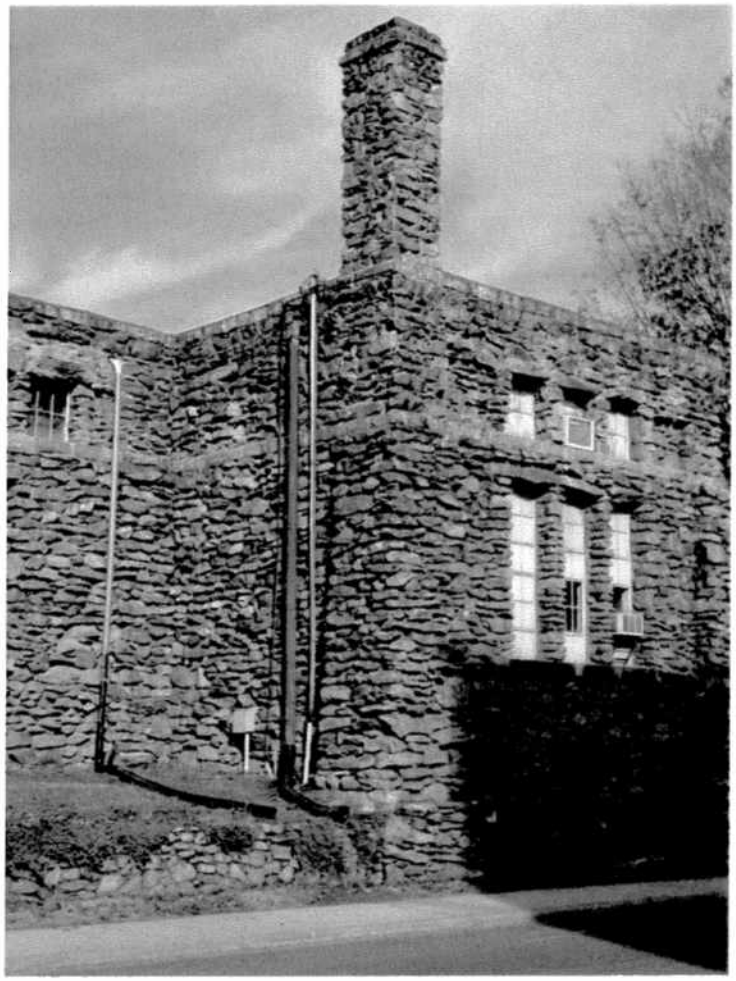


Photo 5. Detail of roof drainage at south wall. The entire east roof is drained by a single 4" downspout. The west roof is drained by two 4" downspouts.

Photo 6. Detail of stonework. Note remains of ivy tendrils.

Photo 7. Southwest corner of west roof. Note undersized and clogged drain, poor installation of membrane at parapet.

Photo 8. South parapet of west roof showing clogged drains, ponding, and poor installation of membrane.

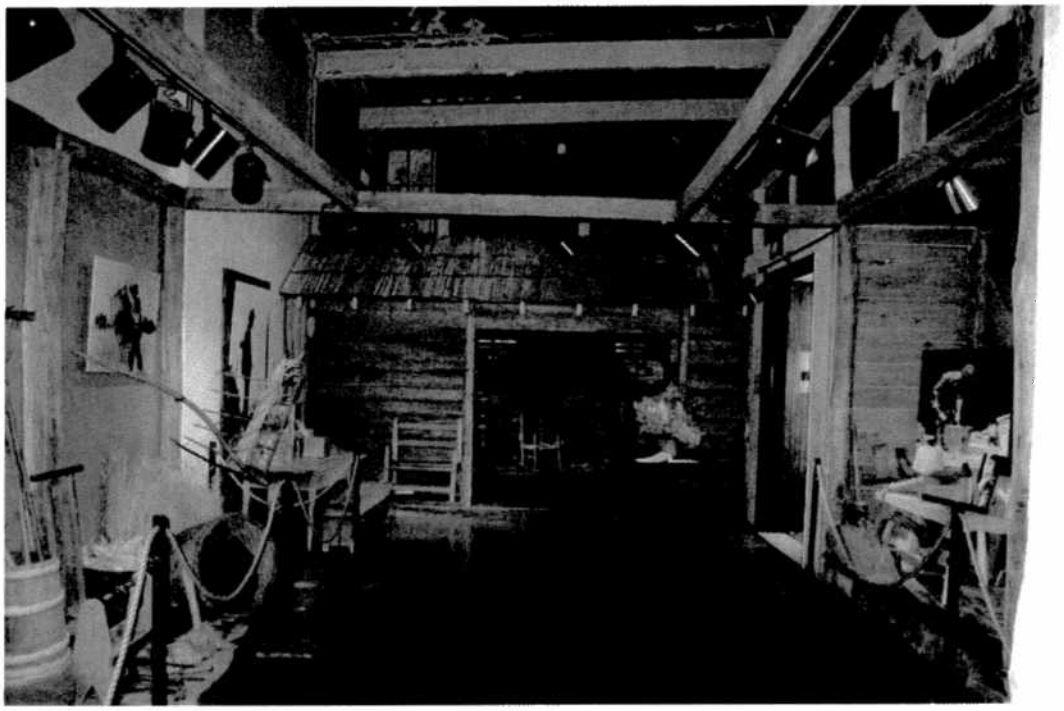


Photo 9. Interior of west wing looking toward mezzanine.

Photo 10. Typical deteriorated condition of plaster around windows due to moisture infiltration. Steel window frames appear to be in fair condition.

Photo 11. View of east wing from 1979 mezzanine. Balcony sections on either side of window may have to be closed off or removed to comply with code requirements regarding egress travel distance.

Photo 12. Typical deteriorated condition of plaster at ceilings.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. Current plans call for partial change of use for accommodating the Madison County Visitor's Center. Overall, the building structure appears to be in good condition and does not warrant any major modifications.

### Description of Existing Construction

The current structure is two stories with a partial mezzanine in the second story. The basement level is a partial basement, only under the east wing. The original building is slab on grade. The exterior of the structure is clad with large stones.

The building is composed of a cast-in-place concrete roof slab, floor slab, beams, and columns. The main floor is supported in areas by steel beams. The foundation walls are composed of a terra cotta block. The exterior walls are the only load-bearing walls in the building. The exterior wall structure is likely composed of terra cotta block with cast-in-place concrete columns.

### Foundation Level

The foundation would likely be composed of a cast-in-place concrete footing below the load bearing walls and columns. The basement level consists of a concrete slab-on-grade. The interior walls are exposed revealing terra cotta block foundation walls.

### First Level Framing

The main floor level over the basement consists of a cast-in-place concrete slab supported by steel beams and what appear to be cast-in-place concrete columns. The remainder of the floor appears to be a concrete slab-on-grade.

### Mezzanine Framing

Figure 9: Documentary photograph showing steel mezzanine beam bracketed to wall.

The west mezzanine framing is of steel construction and was added in 1924. A documentary photograph from the 1950's clearly shows a steel support beam for a mezzanine level. In the photo, the beam is attached to a steel bracket at a wall pilaster *(Figure 9)*. The east mezzanine is of wood construction and added circa 1979. The current east mezzanine floor appears to be supported by wood floor joists, beams, and columns. This mezzanine is attached to the original building structure along the perimeter.

### Roof Framing

The roof structure is a cast-in-place concrete slab supported by cast-in-place concrete beams spanning between exterior walls.

### Observations and Evaluations

The primary cause of deterioration in the building appears to be the failure to eliminate water infiltration. It appears that deterioration in the roof membrane has allowed water to enter the building in the past. The roof has been replaced with a new membrane and there do not appear to be active leaks.

Portions of the building are below grade and have water directed towards the interior of the building. The lower level door was unable to be closed due to warping from water damage. This door is located below grade with water being directed towards the door and the interior of the building.

Stains and efflorescence are present throughout the structure *(Figure 10)*. Efflorescence is the transportation of salts and minerals through concrete or masonry by water. The

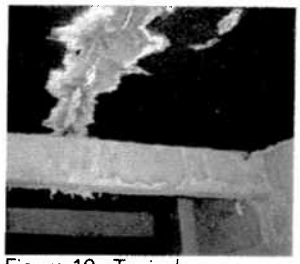


Figure 10: Typical efflorescence at ceiling and beam.

white residue observed on the surfaces of the plaster throughout is caused by these salts and minerals after the water has evaporated. The salts and minerals are a structural component of the concrete and masonry. Continued migration of these substances out of the structural element will deteriorate and ultimately fail the member.

Mold is prevalent in the basement. Certain molds present a health hazard. Water entering the basement should be eliminated to prevent a favorable environment for mold growth.

Several broken windows were observed. These allow exterior elements to enter the building such as wind, rain, snow, spores, and pests.

**Recommendations and Summary**

There does not appear to be any failure of structural members; however, some members exhibits signs of distress that will require attention for continued longevity of the structure.

The primary problem affecting the structure is water infiltrating members and the building itself. Most of this infiltration had been through the roof, which hopefully has now been stopped. At minimum, the grading should be modified to direct water away from the building.

## BUILDING SYSTEMS ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC.

**HVAC Systems**

Heat was originally supplied by a steam boiler located in the basement, which is now abandoned. Heat in the main level is provided by electric baseboard heat, apparently installed as part of the interior museum upfit. There is a window air conditioning unit in the office. There is insufficient ventilation, and no humidity control.

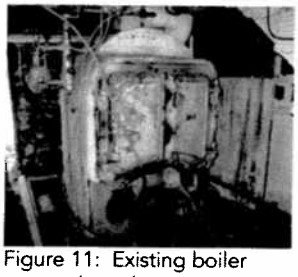


Figure 11: Existing boiler encased in asbestos.

**Electrical Systems**

Electrical service is provided underground to conduit that runs up the exterior of the building on the west elevation to a weatherhead, and conduit back down to the basement to a relatively new load center. There is no fire alarm system in the building.

**Plumbing Systems**

Existing plumbing systems consist of water, waste, and vent systems, all of which are in need of upgrade. Water service enters the building in the basement. It is not clear where building sewer exits the building. Hot water is provided by an electric water heater. The building is not sprinkled. Plumbing fixtures are not water-saving type, and generally do not meet accessibility codes. The number of plumbing fixtures is addressed in the Architectural portion of the report.

**BUILDING CODE ASSESSMENT**

The building was evaluated under the NC Rehabilitation Code. These code provisions would apply should any "Reconstruction" work be undertaken. Refer to the Introduction for definitions.

**Current Use**

Use Group A-3 - Assembly: Museum; 15 sq. ft./occupant.
- Total Area: 1,955 sq. ft. + 708 sq. ft. Mezzanine.
- Total Occupant Load: 130 @ Main Floor + 48 @ Mezzanine.

**Proposed Uses**

Use Group A-3 – Assembly as described above.
Use Group B - Business: Madison Co. Visitor's Center; 100 sq. ft./occupant.
- Total Area: 630 sq. ft. estimated.
- Total Occupant Load: 7 @ Main Floor.

**Construction Type**

Type 1-B: Exterior walls of non-combustible masonry; interior floor and roof structures of non-combustible concrete construction.

**Historic Certification Provisions**

Building is eligible for National Register as contributing to Mars Hill College Historic District. Listing on National Register allows for special provisions under NC Rehabilitation Code Section 1.33 – Historic Buildings.

**Compliance Assessment**

The main floor currently has three means of egress, one of which is accessible. The floor area of the existing mezzanine exceeds one-third of the main floor area by 56 sq. ft., and technically cannot be defined as a "mezzanine" unless the area is reduced. Travel distance from the mezzanine exceeds 75 feet; however, the total occupancy is under 50 persons. A single exit from the mezzanine would be permitted.

**Code Provisions**

The following assessment of requirements refers to NC Rehabilitation Code Section 1.14 (Use Group A-3), §1.17 (Use Group B), and §1.33 (Historic Buildings):

1. Automatic fire suppression. Not required for area under 12,000 sq. ft. (§1.14.a)
2. Automatic fire alarm. Required, assuming that rehabilitation work will exceed 25% of floor area. (§1.14A.b)
3. Exits.
   - Two exits required from Main Floor. Requirement is exceeded. (§1.14.b)
   - Single exit from Mezzanine permitted with occupant load under 50. (§1.14.b)
4. Panic hardware. Required for all exit doors if occupant load over 100. (§1.14.c.2)
   - Existing or replica hardware permitted provided no life safety hazard and meets intent of NC Accessibility Code. (§1.33.b.6.i)
5. Egress lighting. Emergency lighting and illuminated exit signs required. (§1.14.g)
6. Handrails. Required at all exit stairs and ramps. (§1.14.h)
7. Guardrails. Required at all stair and ramp landings over 30" above grade. (§1.14.i)
8. Vertical opening protection. May be required between main floor and mezzanine as defined. (§1.14.j.3.i)
   - Existing mezzanine is 36.2% of total floor area and does not meet definition.
   - Stairway enclosure may be omitted between 1st and 2nd floors. (§1.33.b.9.i)
9. Plumbing fixture requirements.
   - One unisex accessible toilet room required; two recommended.
   - One service sink and one water fountain required.
   - Based on occupancy of less than 50 persons. (§1.14.l)
10. Interior finishes. Existing finishes meet requirements of Section 1.11.c for flame spread. (§1.14.n)

**Conclusions and Recommendations**

The existing front entrance can be made accessible with minor alterations. According to NC Accessibility Code Section 38.1.2, alterations to the other inaccessible entrances will not require that these entrances also be made accessible. However, it is strongly recommended that an accessible ramp and landing be added to the side (east) entrance for use by the Madison County Visitor's Center *(Drawing A102)*. This will allow for the Rural Life Museum to be closed off from the visitor's center when not occupied.

The existing mezzanine technically cannot be defined as a "mezzanine" unless the floor area is reduced by at least 56 square feet. Closing off portions of the side balconies to reduce the floor area is recommended. These areas can be reserved for display use.

**PRESERVATION RECOMMENDATIONS**

**Critical Maintenance Issues**

1. Drainage. Building drainage design should be re-evaluated.
   - Scuppers should be overflow type with open leader heads. Size and placement of scuppers will need to be designed.
   - Drainage should be piped away from building.
   - Grade away from basement wall along south side.
   - Locate underground mechanical chases and confirm current use. If abandoned, install foundation drain and backfill with gravel.
   - Install foundation drainage around perimeter of building at basement.
   - Construct area well at basement doorway with drain away from building.
2. Roof Membrane. Existing roof membrane should be closely evaluated with regards to poor quality installation.
   - Assuming deck membrane is installed correctly, it may be possible to remove, salvage, and re-install membrane over parapet per approved manufacturer's detailing.
   - Roof deck membrane should ideally be installed over sloped deck insulation to ensure proper drainage to drain scuppers.

Figure 12: Typical condition of roof membrane at parapet.

3. Stone Masonry. Restore stonework per National Park Service Technical *Preservation Brief 1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings, Brief 2: Repointing Mortar Joints in Historic Masonry Buildings, and NPS Preservation Brief #3: Dangers of Abrasive Cleaning to Historic Buildings.* (www.cr.nps.gov/hps/tps/briefs)
   - Exposed watertables and other ledges should have a sloped cementitious wash with a waterproof coating to match original mortar color.
   - All ivy roots and other organic matter should be removed from mortar joints.
   - Repoint deteriorated mortar joints and inappropriate cement mortar repairs with lime mortar to match existing original joint color and profile.
   - Windows. Restore steel windows per National Park Service Technical *Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows.* (www.cr.nps.gov/hps/tps/briefs/brief13.htm)
   - Locate all sections of windows that have been removed and store in the basement of Montague pending restoration.
   - Replace missing sections of steel windows or fabricate new sections to match.
   - Prepare, re-glaze and paint steel windows to prevent further deterioration.
4. Doors. Repair exterior doors to prevent further deterioration.
   - Clean, prep and refinish exterior surface.
   - Clean, prep and paint exterior iron hardware, hinges.
   - Preserve all original hardware as permitted by Building Code or Rehabilitation Code.

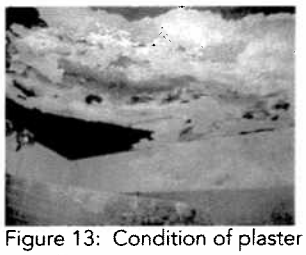


Figure 13: Condition of plaster at ceiling.

**Priority Rehabilitation Issues**

1. Accessibility. Refer to Main Floor Plan – Proposed.
   - Install handrail at south doorway to meet Code.
   - Construct new accessible ramp at east doorway with landing and handrail.
2. Interior Finishes. Refer to NPS Technical *Preservation Brief #29: Repairing Historic Flat Plaster - Walls and Ceilings.* (www.cr.nps.gov/hps/tps/briefs/brief29.htm)
   - Remove all deteriorated plaster and refinish to match original.
   - Prep and paint interior walls and ceilings.
   - Refinish floor to original appearance or sympathetic treatment.
3. New Construction. Refer to Main Floor Plan – Proposed.
   - Construct new accessible restrooms, office and catering kitchen.
   - Construct new Visitor's Center desk.
4. HVAC System.
   - Complete asbestos abatement on all piping and equipment.
   - Remove existing boiler.
   - Install new HVAC system(s) to provide adequate temperature and humidity control for museum. The consulting engineer recommends a DX (direct expansion) ventilation unit, used in conjunction with the existing electric baseboard heat.
   - Provide ventilation and humidity control in the basement to accommodate museum storage.
   - The DX system can serve the entire building, if properly designed, and provide the air conditioning for offices or reception areas that may be incorporated for other building uses.
5. Plumbing System.
   - Install new plumbing system throughout.
   - Install new fixtures per Main Floor Plan – Proposed.
   - Reuse existing electric water heater if feasible, or replace.
6. Electrical System.
   - Rework the electrical service entrance, so that it enters the building directly underground.
   - Make repairs and upgrades to the existing panel as required to support DX cooling and dehumidification.
   - Install new electrical wiring and/or update existing to meet Electrical Code.
   - Design and install new ambient, display, and task lighting.
   - Provide a complete fire alarm system.

Figure 14: Window circa 1924.

**Optional Rehabilitation Issues**

1. Windows.
   - Select steel windows to be made operable as required.
   - Install interior storm windows. Allied Window, magnetic interior window, fixed or operable. (*www.stormwindows.com*)
2. Interior.
   - Confirm original design of mezzanine balustrade, remove later alterations, and restore to earlier configuration.
   - Remove wood balustrade at east wing and rebuild to be sympathetic to design of original.

## COST ESTIMATE

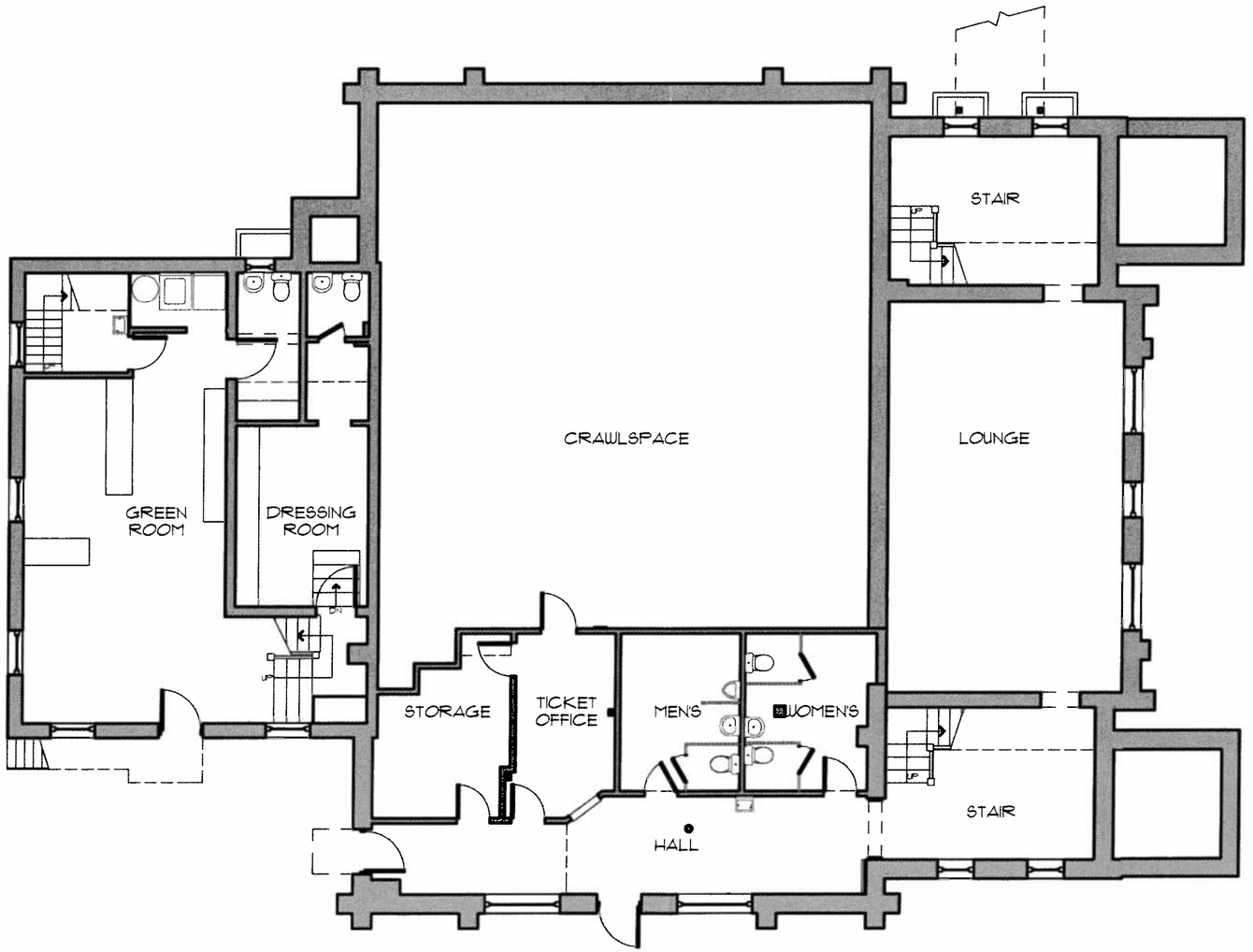
Based upon current market information, a statement of probable cost follows. Unit price figures are obtained from R.S. Means, 1st quarter 2006. Square foot costs for mechanical and electrical are provided by Reece, Noland & McElrath, Inc. These costs do not include asbestos abatement, mold removal or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead &Profit |
|---|---|---|---|---|---|
| 01 General Conditions | Construction facilities, temporary equipment, administration, regulatory requirements | | | 10% | $24,970.00 |
| 02 Existing Conditions | Demolition of concrete slab on grade | 7 | C.F. | 5.00 | $35.00 |
| | Excavating trench at foundation by hand | 135 | C.Y. | 21.50 | $2,902.50 |
| | Lead paint removal/prep multi-light steel windows | 555 | S.F. | 18.00 | $9,990.00 |
| | Demolition of boiler and pipes (160 - 2000 MBH) | Allowance | Ea. | 1,200.00 | $1,200.00 |
| | Demolition of electric baseboard heat | 67 | L.F. | 9.90 | $663.30 |
| 03 Concrete | Concrete ramp and landings | 200 | S.F. | 12.30 | $2,460.00 |
| 04 Masonry | Masonry - point existing, sloped wash at watertable | 1,310 | S.F. | 19.20 | $25,152.00 |
| | Masonry - clean existing | 5,300 | S.F. | 1.10 | $5,830.00 |
| 05 Metals | Balustrade | 54 | L.F. | 50.00 | $2,700.00 |
| | Railing at stairs, ramps | 80 | L.F. | 34.50 | $2,760.00 |
| | Metal stud partitions - 3-5/8" @ 16" o.c. | 1,161 | S.F. | 4.55 | $5,282.55 |
| 07 Thermal & Moisture Protection | Foundation drainage | 150 | L.F. | 7.45 | $1,117.50 |
| | Foundation waterproofing | 570 | S.F. | 0.85 | $484.50 |
| | Roof drainage - reconnect roof scuppers to drains | 4 | Ea. | 263.00 | $1,052.00 |
| | Roof drainage - repair/replace gutters, downspouts | 100 | L.F. | 3.80 | $380.00 |
| | Floor drain - exterior at slab | 1 | Ea. | 155.00 | $155.00 |
| 08 Openings | Doors - new interior doors | 4 | Ea. | 363.20 | $1,452.80 |
| | Doors - new custom wood doors | 4 | Ea. | 1,440.00 | $5,760.00 |
| | Doors - restore existing exterior doors | 7 | Ea. | 790.00 | $5,530.00 |
| | Doors - install bronze weatherstripping at exterior doors | 5 | Ea. | 63.00 | $315.00 |
| | Doors - new door hardware to meet ADA | 6 | Ea. | 138.80 | $832.80 |
| | Windows - storm windows, interior magnetic | 555 | S.F. | 6.40 | $3,552.00 |
| 09 Finishes | Carpet | 25 | S.Y. | 45.65 | $1,141.25 |
| | Exterior painting - steel windows | 555 | S.F. | 3.70 | $2,053.50 |
| | Gypsum board | 2,324 | S.F. | 4.25 | $9,877.00 |
| | Interior painting | 9,023 | S.F. | 0.65 | $5,864.95 |
| | Plaster restore | 1,400 | S.Y. | 18.25 | $25,550.00 |
| | Concrete flooring refinishing/painting | 2,088 | S.F. | 0.30 | $626.40 |

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead &Profit |
|---|---|---|---|---|---|
| **10 Specialties** | Grab bars to meet ADA | 4 | Ea. | 85.50 | $342.00 |
| **12 Furnishings** | Cabinets - kitchen cabinets and counter to meet ADA; reception counter | 37 | L.F. | 160.00 | $5,920.00 |
| **22 Plumbing** | New plumbing fixtures per plans | 7 | Ea. | 1,375.00 | $9,625.00 |
| | New gas-fired tankless water heater | 1 | Ea. | 2,500.00 | $2,500.00 |
| **23 HVAC** | Rework/replace piping, new boiler, new DX units | 3,324 | S.F. | 18.70 | $62,158.80 |
| **26 Electrical** | Install new electrical wiring, lighting fixtures | 3,324 | S.F. | 13.20 | $43,876.80 |
| **31 Earthwork** | Grading by hand, light soil, less than 6' deep | 17 | C.Y. | 33.00 | $561.00 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | | | **$274,674.00** |
| | Architectural & Engineering Fees | | | 9% | $ 24,720.00 |
| | Contingency | | | 20% | $59,879.00 |
| **TOTAL ESTIMATED COST** | | 3,324 | S.F. | $23.90 | **$359,273.00** |

## Notes

[1] National Register Nomination.




EXISTING
BASEMENT PLAN
SCALE: 3/32" = 1'-0"

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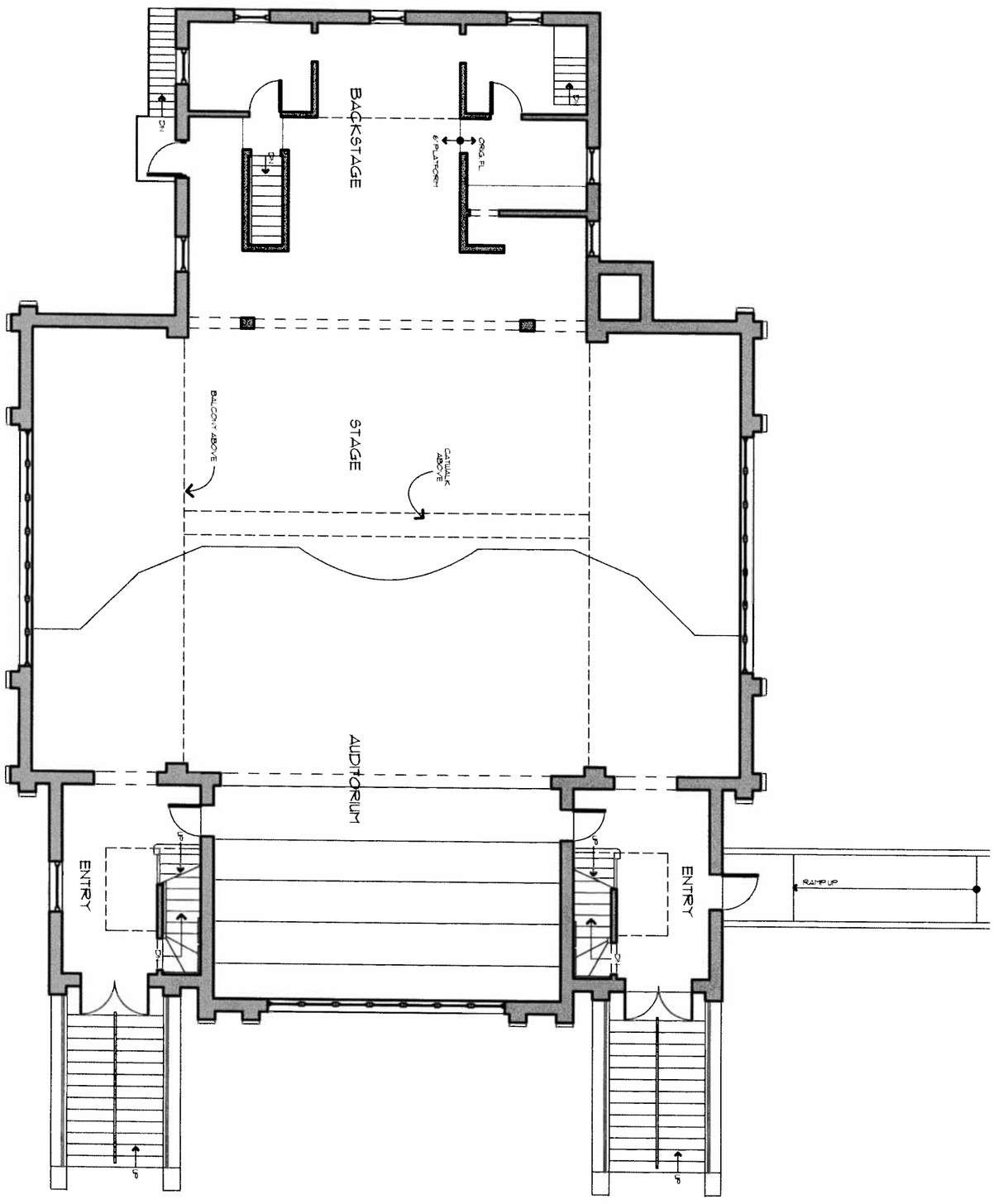
OWEN THEATRE
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
BASEMENT
PLAN




EXISTING
FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

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# OWEN THEATRE

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING FIRST FLOOR PLAN

Page 2 of 3

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# OWEN THEATRE

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
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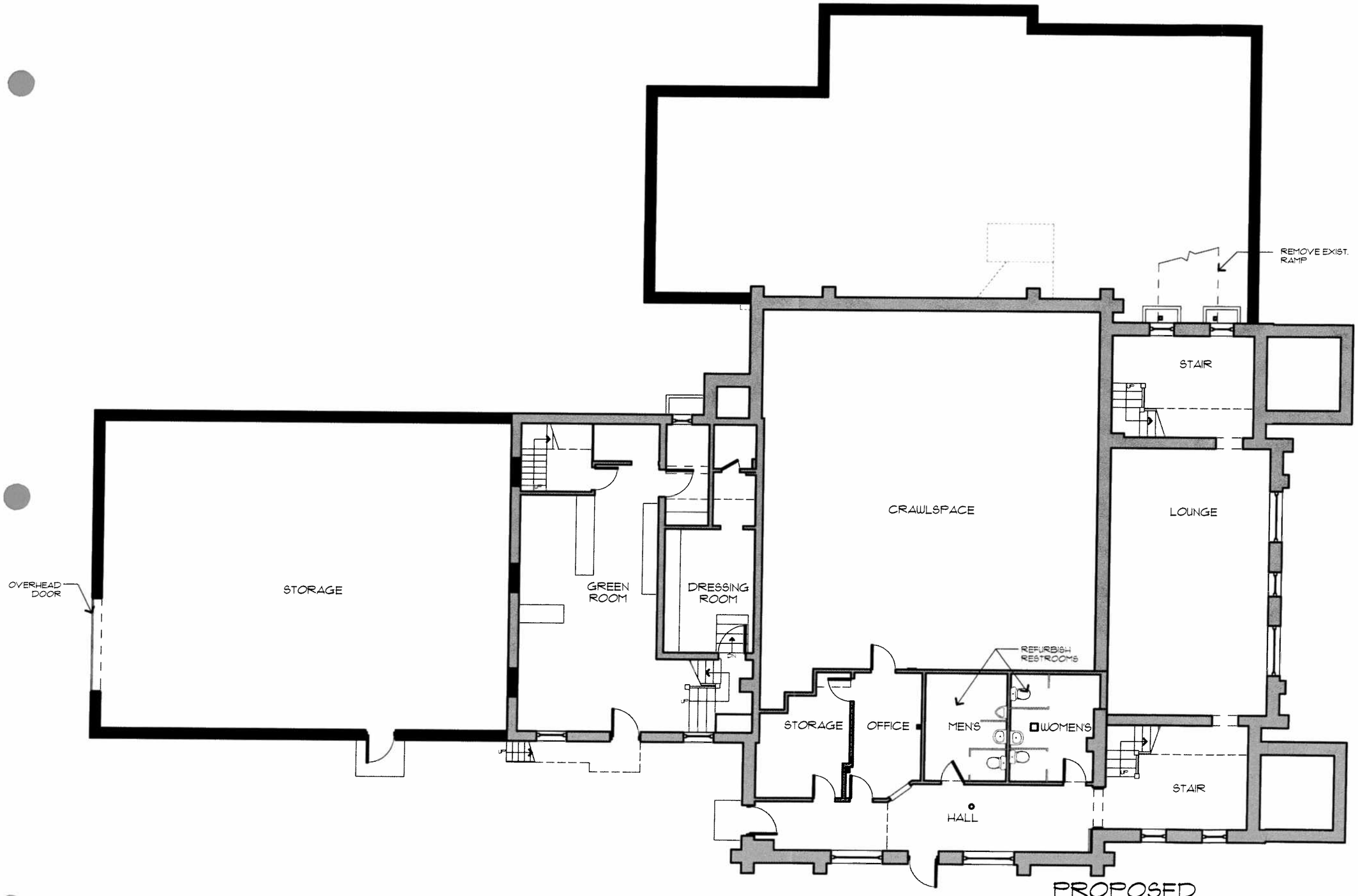
EXISTING
BALCONY
FLOOR
PLAN




PROPOSED
BASEMENT PLAN
SCALE: 3/32" = 1'-0"

N

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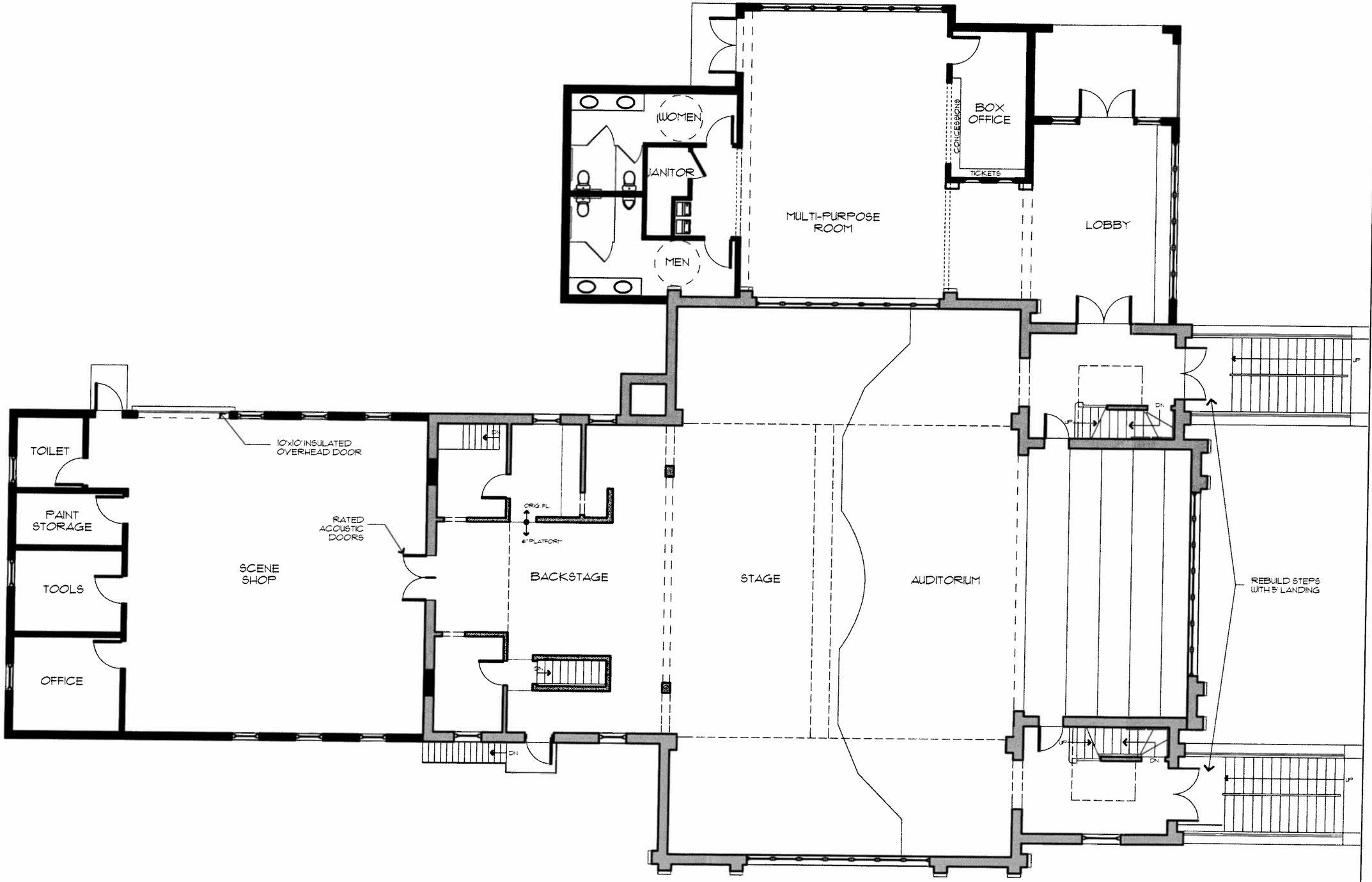
# OWEN THEATRE

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED BASEMENT PLAN




PROPOSED
FIRST FLOOR PLAN
SCALE: 3/32" = 1'-0"

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# OWEN THEATRE

PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED FIRST FLOOR PLAN

PROPOSED
BALCONY FLOOR PLAN
SCALE: 3/32" = 1'-0"

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OWEN THEATRE
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
BALCONY
FLOOR
PLAN

# OWEN THEATRE

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

*(Mars Hill College 83-6-825)*


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# OWEN THEATRE

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

**GENERAL INFORMATION**

| | |
|---|---|
| **Year Built** | 1919 as Mars Hill Baptist Church; acquired by Mars Hill College in 1953; converted to Owen Theatre in 1968 |
| **Style** | Classical Revival |
| **Architect** | Martin Egbert Parmalee (1852-1945), Knoxville, Tennessee |
| **Builder** | Unknown |
| **Original use** | Baptist Church |
| **Current uses** | Performing Arts Theater |
| **Proposed use** | Performing Arts Theater |
| **Building area** | Ground Floor: 2,498 SF<br>First Floor: 4,062 SF<br>Balcony: 3,328 SF<br>Total: 9,888 SF |

**HISTORIC SIGNIFICANCE**

Important to the history of both the college and the town of Mars Hill, built as the Mars Hill Baptist Church. The building is a good example of Classical Revival design.

**HISTORIC CERTIFICATION**

Contributing building, proposed Mars Hill College Historic District, National Register of Historic Places.

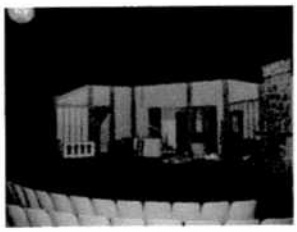
**ARCHITECTURAL SIGNIFICANCE**

While not originally a college building, the church was always closely related to the college as both were affiliated with the Baptist Church. Indeed the two were referred to as "Siamese twins.[1]" The Mars Hill Baptist Church was started as the Pleasant Hill Baptist Church, which was constituted in 1856 as the French Broad Baptist Institute's (now Mars Hill College) building. The church worshipped there until 1887 when it constructed a wood building, which was replaced by this building in 1919. It was designed by the same architect who designed Marshbanks Hall, M. E. Parmalee.

In 1952, the church claimed 463 college students in membership from 165 other churches in an eighteen-state area. These membership figures and the support of the college provided the impetus to raise funds to build the current church building north of campus. The college purchased the church building for $40,000 in 1953. It was converted to its current use as a performing arts theater in 1968 and was renamed Owen Theater in honor of Reverend J. R. Owen, former pastor of Mars Hill Baptist Church during the construction of the building and former trustee of the college.

**Exterior**

- Massing (building form) and roofline
- Brick masonry
- Wood framed windows including stained glass
- Wood doors



**Interior**

- Plaster Walls
- Wood Floors
- Wood trim
- Original beaded board ceilings
- Original pressed tin ceilings over balconies

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available. Some have been cropped slightly to fit the format of the report.

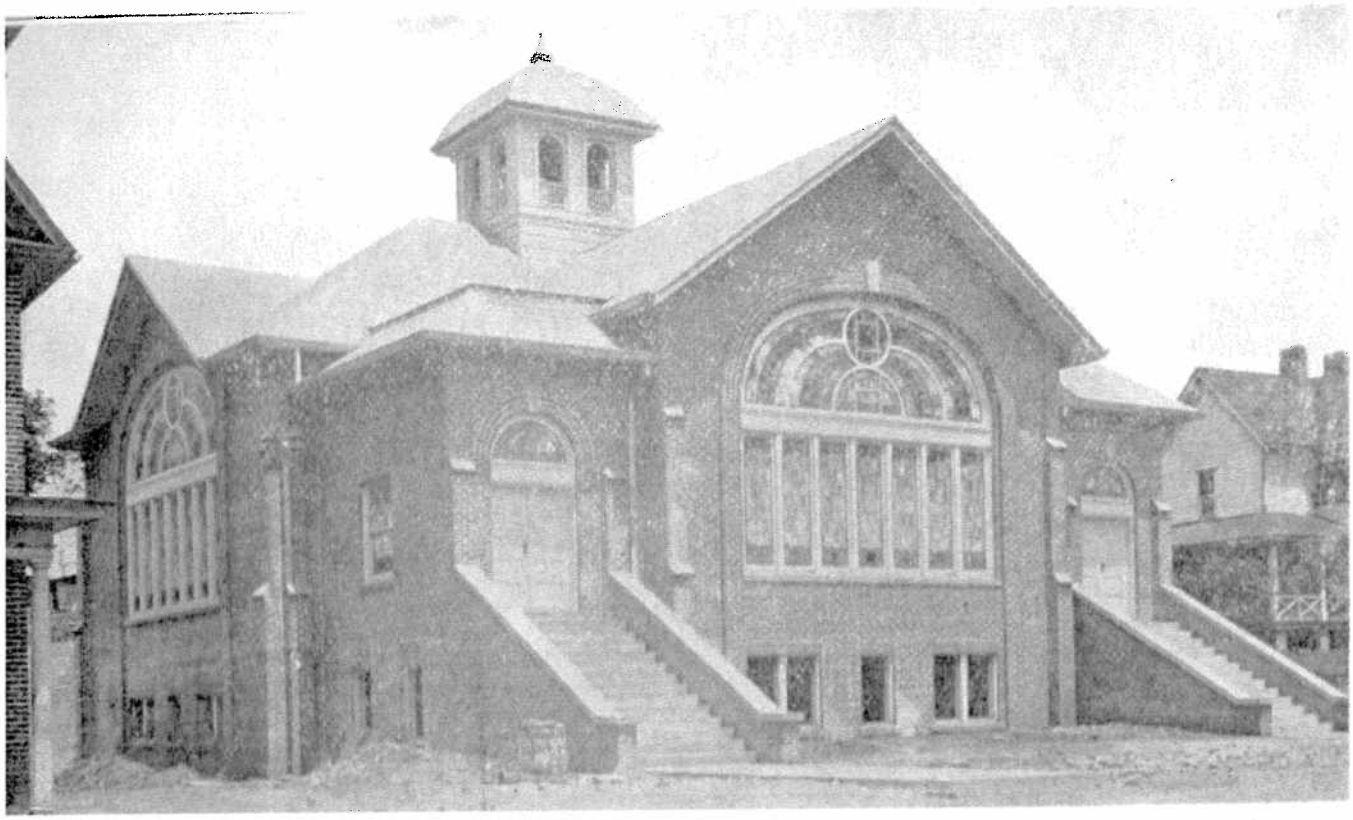


Image 1. 1918, "New Church." Mars Hill Baptist Church during construction as the ground floor windows are not installed. The original front porch on Spilman Hall is visible on the left and a house that predated Jarrett House is on the right. *(Mars Hill College Quarterly, June 1918, after p. 12.)*

Image 2. 1920, "'E.' B.Y.P.U." group on the front steps. This photo also includes the house to the right that predated Jarrett House. *(The Laurel, 1920.)*

Image 3. 1927 group in front of Jarrett House, with Owen Theatre in the background. *(Mars Hill College Quarterly, April 1927, after p. 8)*

Image 4. Date unknown, hand painted postcard, after the construction of Jarrett House and after the addition of the larger front porch on Spilman Hall about 1921. The corner of the Auditorium Building (1906-1961) is to the right. *(MHC)*

Image 5. Date unknown, Philomathian group photograph, probably early 1920s. (*MHC 83-6-825*)

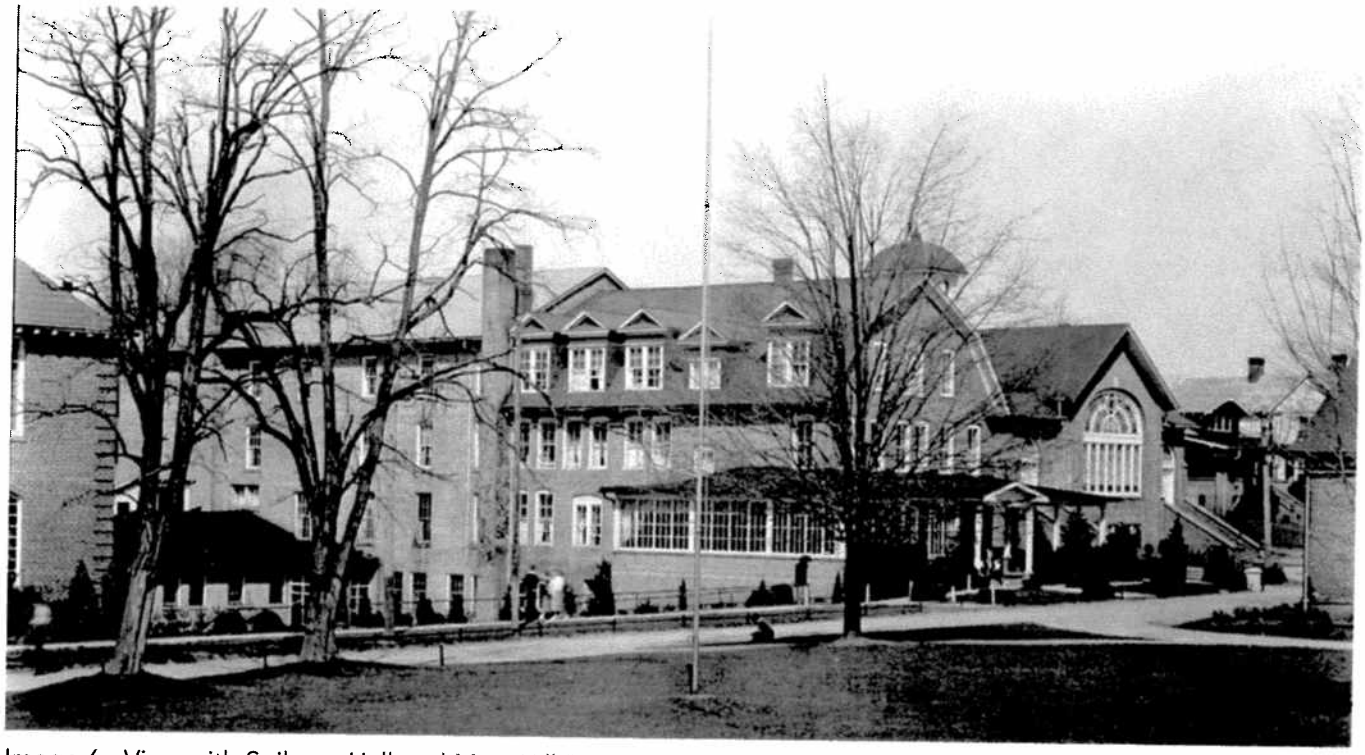


Image 6. View with Spilman Hall and Mars Hill Baptist Church, date unknown. *(MHC)*

Image 7. View with Spilman Hall and Mars Hill Baptist Church, date unknown. *(MHC)*

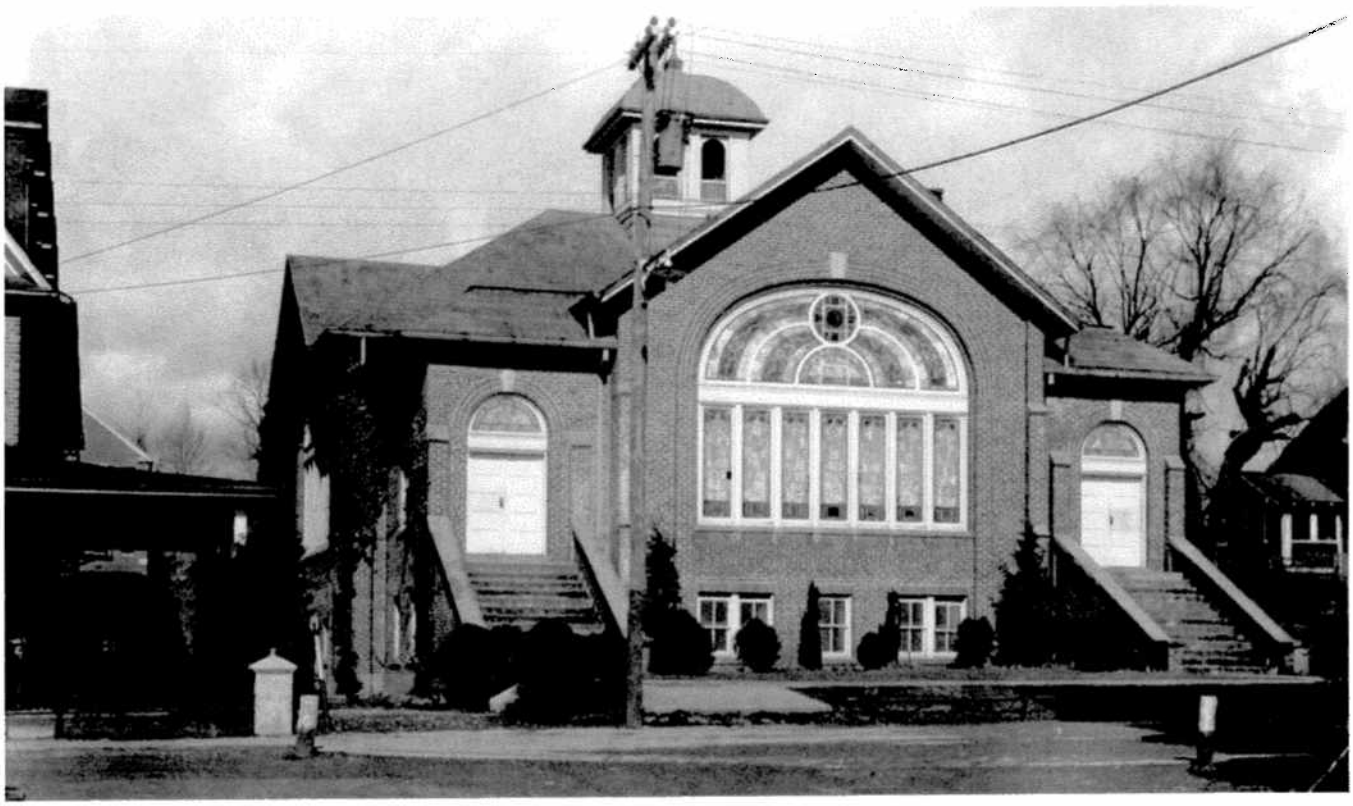


Image 8. Mars Hill Baptist Church, date unknown. Note the ivy growing on the walls of the building. *(MHC 83-6-860)*

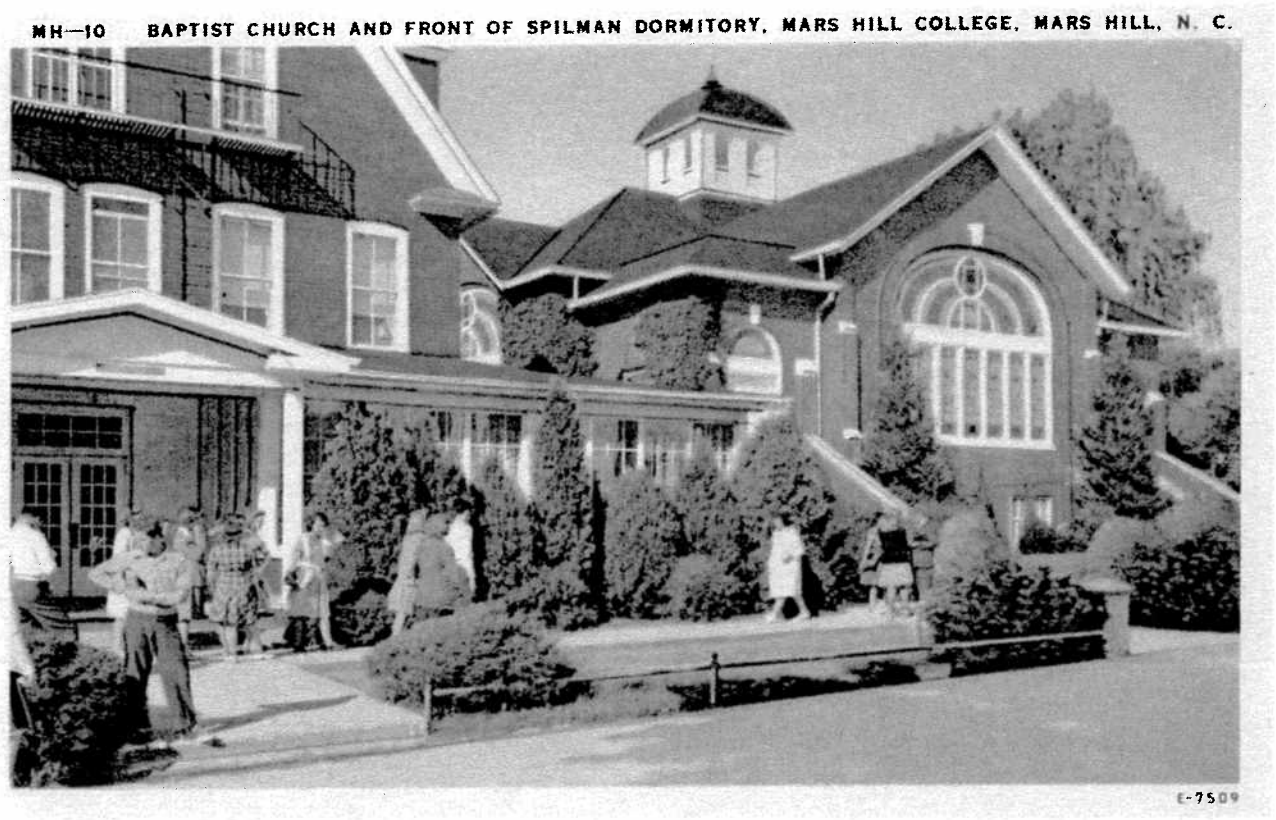



Image 9. After 1941, handpainted postcard. *(MHC)*

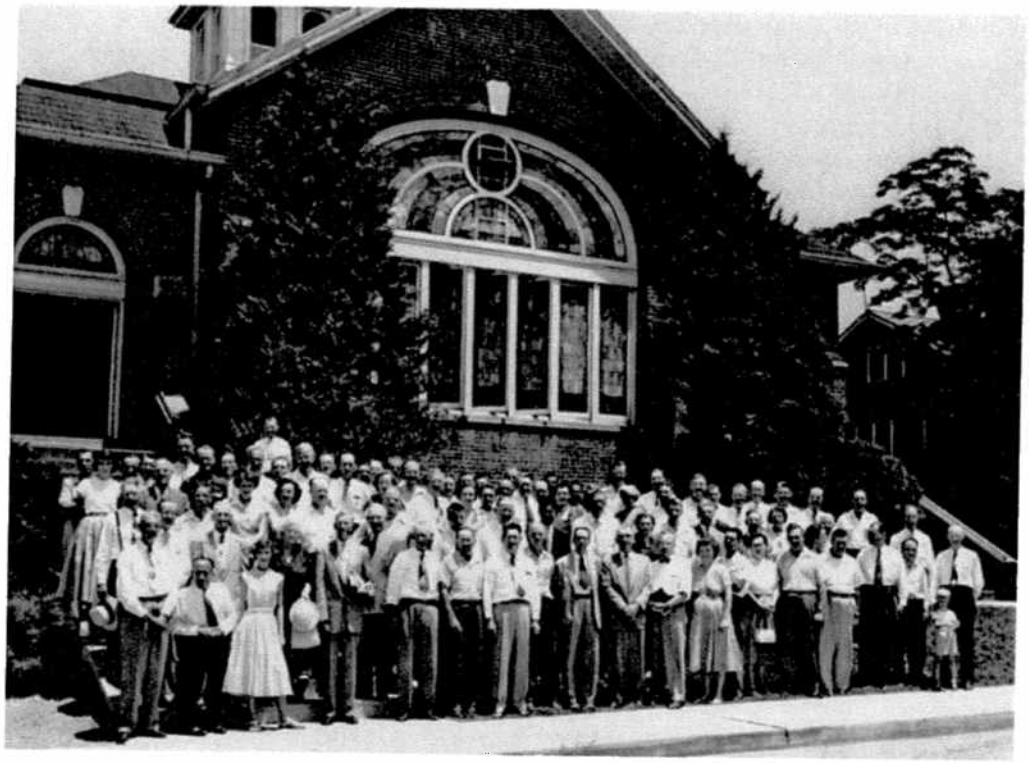


Image 10. Date unknown, group in front of Mars Hill Baptist Church. *(MHC DN-007-a)*

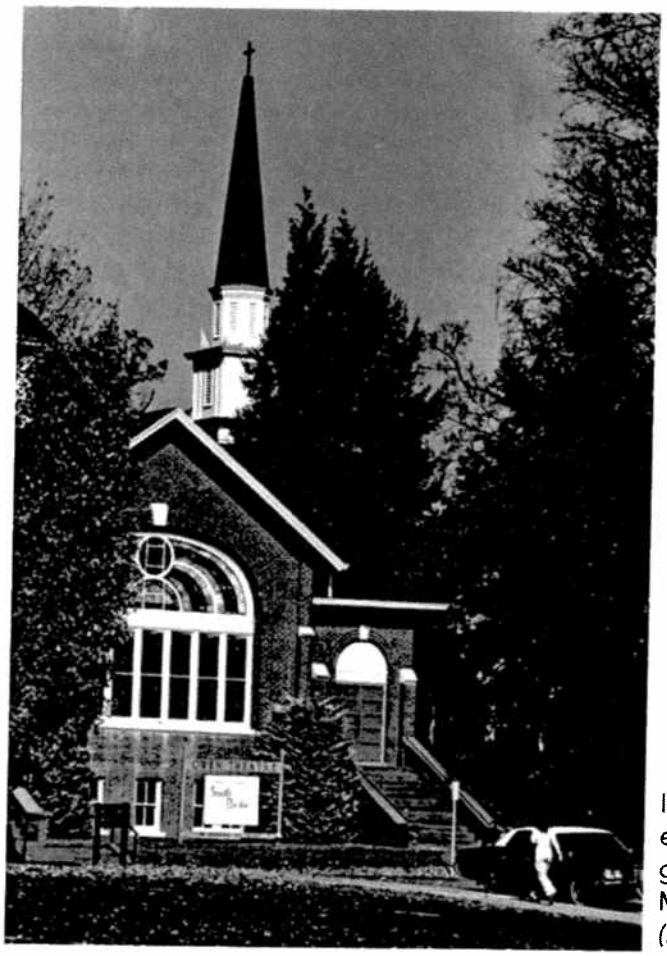


Image 11. Ca.1970s. Note that the transom over the entrance door has been covered over and the stained glass has been removed from the casement windows. Mars Hill Baptist Church is in the background. *(MHC DN-034)*

## ARCHITECTURAL DESCRIPTION

The massing of the three-story Owen Theatre is laid out as a Greek cross with small vestibules tucked into the corners on the main (south) facade. Tradition holds that the building has two front doors so that boys and girls could enter the building from opposite sides. Gable roofs cover the three main arms of the cross, with large circle top stained glass windows on the ends. The rear arm of the cross form is more utilitarian and has a lower, hipped roof.

The center of the theater and the original sanctuary is directly under the center of the cruciform, which has a cupola above on the roof. Theater seats now fill the center and front arm of the cross and face north toward the rear arm where the stage and back stage areas are located. Seating also originally faced toward the center inside the side arms of the cruciform. Three balconies provided more seating, one in each of the main arms of the cross. All of the side and balcony seating has been removed for the current theater use, the side balconies are used for storage and the rear balcony is now the sound and light control room.

The ground level of the building is slightly below grade at the front and is on grade at the rear. The front section includes staircases, a meeting room and restrooms and the rear section is now used for dressing rooms with access to the rear of the stage. There is an unfinished crawlspace under the stage.

### Exterior

Brick load-bearing walls are punctuated by large arched window openings on the main facades. These windows were originally all decorative stained glass with an arched tracery transom over a bank of seven casement sash. The stained glass has been removed from the casements on the front facade, which now have obscure glass. Other windows are wood double hung single openings on the upper level and paired and single 2/2 double-hung windows at the lower level. The double 5-panel front doors are original and originally had stained glass transoms that have been covered with a solid panel on the outside.

The roof is currently covered with composition shingles and membrane roofing on the flat areas over the front vestibules, but may have had a stamped metal shingle roof originally. A large square cupola with double arches on each side crowns the roof with a curved hip roof that is capped by a finial.

### Interior

The interior of the building has been altered to reflect its change in use from a church sanctuary to a theater. While the original sanctuary is largely intact, it is difficult to describe all of the changes because no interior photos have been found of the building while it was a church. (Hopefully further research may find photographs of a wedding or other event.) There have been many additions such as catwalks and stage lighting, the removal of pews, the installation of theatre seats on risers, the extension of the stage over the original pulpit areas, and enclosure of the balconies. The two side balconies have been entirely enclosed and the area is now used for storage, while the rear balcony is partially enclosed from the theatre house and is used as a control booth.

Heavy drapes cover the windows in the house and walls and other surfaces have been painted black. Backstage areas have been altered by removing walls and changing the floor level, and by installing wooden interior shutters over the windows.

The lower level has been adapted for a green room and dressing room in the rear wing of the building while the main section is used for theater patrons with a lounge area and restrooms.

## ARCHITECTURAL CONDITION ASSESSMENT

The change in use from a church sanctuary to a performing arts theater has not been a gentle transition over the years. Alterations have been made to allow for production needs with little regard for historic building fabric, and low funds have resulted in alterations that are often rather haphazard. Maintenance has been minimal and while some repairs have been made, further work is needed to repair water damage and upgrade interior finishes.

The building does not have enough space to accommodate all of its needs and its physical constraints limit productions and its use. Sets are constructed in Spilman Hall and must be hand carried to the stage and are limited to sections that will fit through the front doors. Physically carrying the sets between buildings and up steps also presents a safety problem, which is compounded when it is raining.

Patronage of productions, both during the school year and the summer, has decreased over the past few years due to the lack of proper disabled access and restrooms. Both the box office and patron restrooms are currently located in the basement, which are not convenient, inaccessible and inadequate in number for a theatre with 200 seats. Intermissions are timed so that patrons can exit the theater, use the restrooms in another building, and return to their seats.

Despite these problems, the theater is well-liked by both the theater department and patrons. They like the size of the house and the intimate feel of the theater and there is strong sentiment to continue using the building despite its problems.

### Exterior

Exterior walls are in good condition and some repairs are needed on limited areas. The worst areas are on the wing walls of the front stairs, which need repointing at the bottom. These steps are in good condition, but do not meet current codes and are dangerous as there is no landing at the top and the doors swing out. This situation needs to be corrected, and will require some rebuilding of the wing walls.

Windows and doors are in need of repair, including cleaning and painting. Some of the original stained glass needs repair as well and the arched transoms over the front doors have been covered over. As the windows are an important feature of the building, these should be repaired. The windows were designed to let as much natural light into the building as possible, but theater use requires as much natural light as possible to be blocked. The windows have been covered over on the interior with black wooden shutters and heavy draperies to block the light.

One of the beautiful features of stained glass windows is their appearance from the exterior of the building at night, when there are lights on inside the building. This effect is lost with the present window coverings. It is suggested that shadow boxes could be built on the interior with internal lighting to allow the windows to be lighted at night, but keep the interior dark. It may be desirable, however, to keep the draperies on the interior for acoustic purposes.

The roof has been replaced in recent years and is currently in good repair, although leaks were prevalent at one time and many of the ceilings, especially over the front stairs, have not been repaired. The roof was not installed using the best practices, so future problems are likely.

### Interior

Although the interior is worn and needs new finishes including carpet and paint, it has a

pleasant atmosphere that serves productions well. It is an intimate theater that is well liked by the members of the department, SART, and patrons with a 200 seat house and it allows for a variety of functions. Many support functions, such as the set and costume shops and set, prop, and costume storage, are housed in Spilman Hall to the west. Rest room facilities in other buildings are also used during productions when the facilities in the building are not sufficient to serve the theater patrons.

Some alterations have left dangerous conditions, such as an extra step on the front stair landings. Other alterations to the backstage area have left many steps and uneven surfaces on the floor. A very steep access stair was added to the northeast corner that is very dangerous and not built well with very high risers, narrow treads, no landing at the bottom, and an open handrail. This is dangerous for actors, especially when they are sometimes in uncomfortable costumes.

Alterations to the building that enclosed the balconies, created the stage, added catwalks and rigging, and other features of a working theater were mostly made by faculty and students. These are all done in a haphazard manner, with little finishing which also leave some potentially dangerous conditions (see structural report) and a overall appearance of not being finished.

A full rehabilitation and additions are needed to renew finishes and approve the function and appearance of the building. This will correct code issues and dangerous situations, make the building function more smoothly, and provide a more pleasant experience for patrons.

**Hazardous Materials and Conditions**

The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and boiler. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical ceiling tiles, and plaster and gypsum wall board joint compound. Mold can be present wherever water damage to absorbent materials has occurred.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant. See the Introduction for additional information.

## CURRENT PHOTOGRAPHS

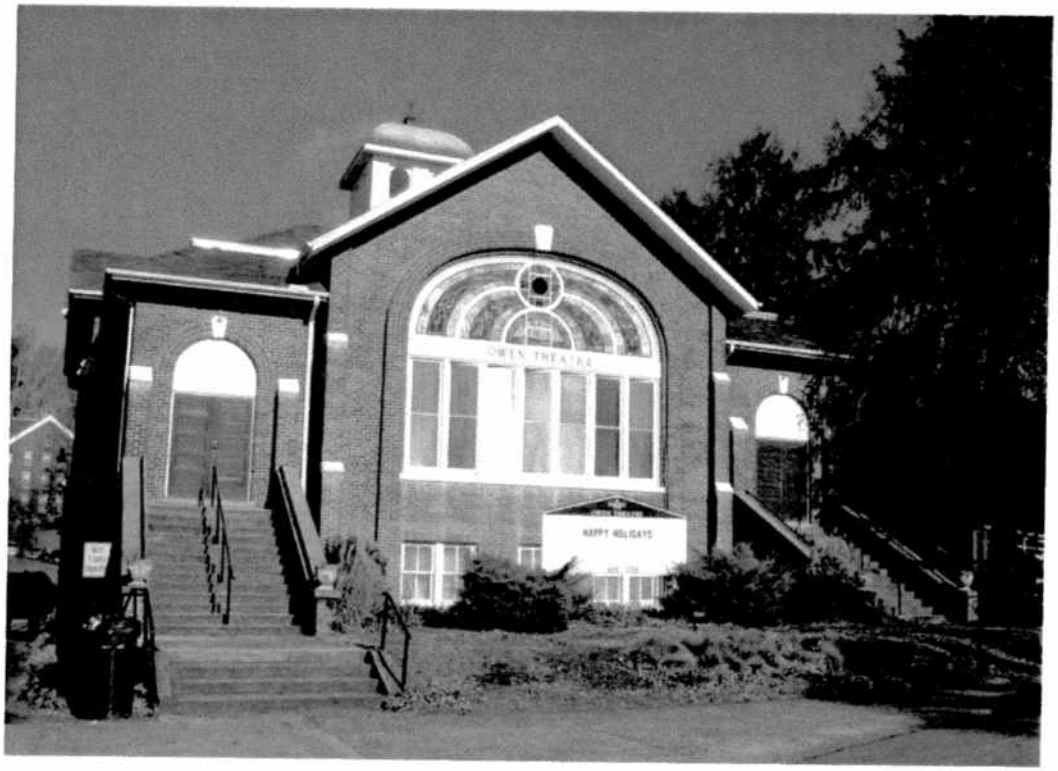


Photo 1. South (main) facade. The building has not been altered very much on the exterior from its original construction in 1919. Note that the roof material has been changed to asphalt shingles and that the arched transoms over the entry doors have been covered over.

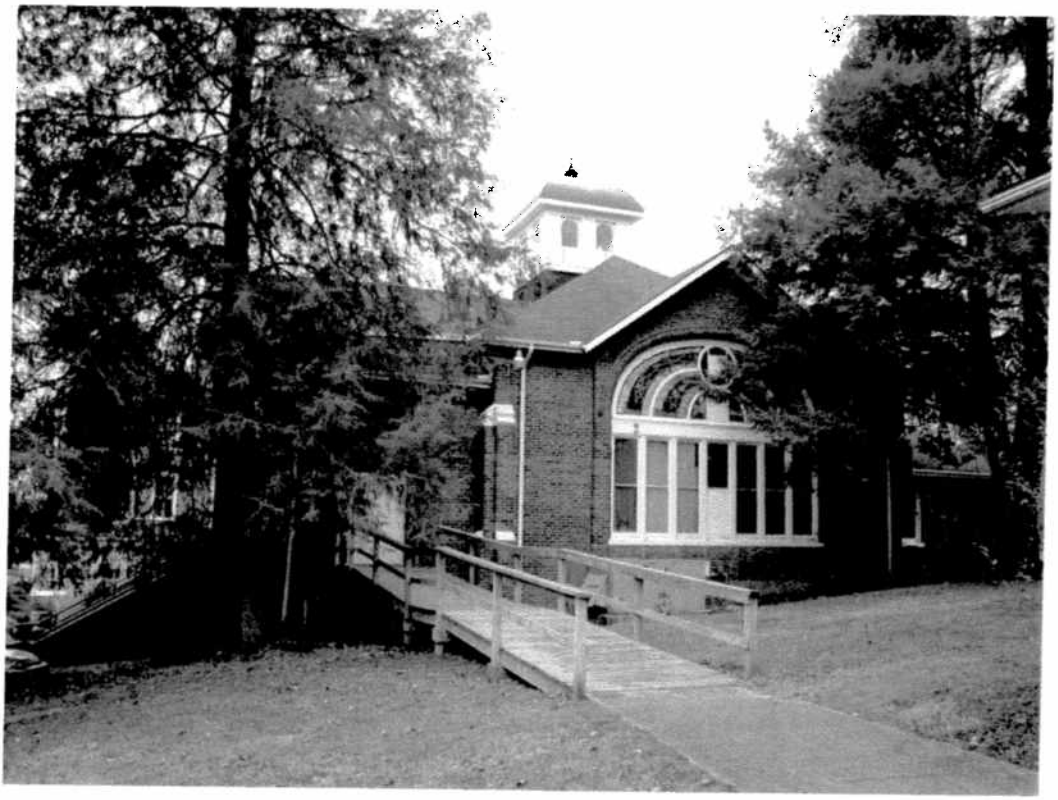


Photo 2. East facade with added wooden handicap ramp. The ramp and entry door do not meet current codes and this is not an attractive addition to the building. A portion of the center panel of the large window has been removed and unfilled with a wood panel.

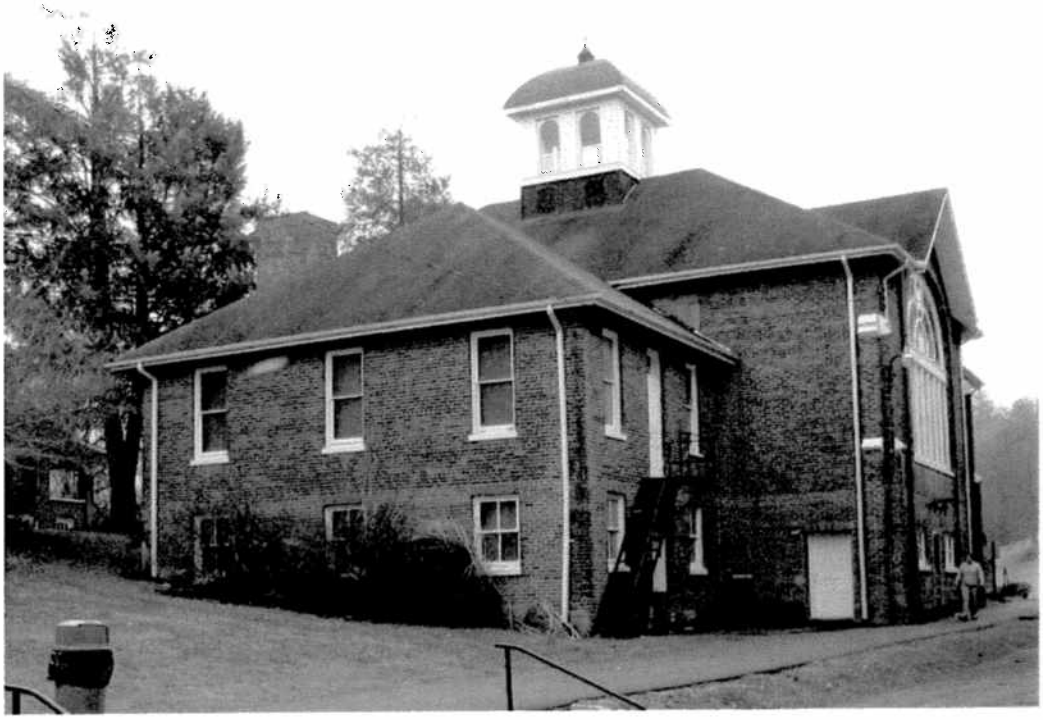


Photo 3. North (rear) and west facades. Rear exit from the upper level at the backstage area is through a fire escape, which does not meet current code.

Photo 4. Entrance steps to west main entrance. Concrete sidewalk is cracked and there is not a landing at the top of the stair outside the doorway.

Photo 5. Brick wall flanking main entrance stairs. The masonry is damaged from water infiltration and needs to be rebuilt.

Photo 6. Front windows on south facade. These windows are permanently fixed slightly open due to paint build-up.

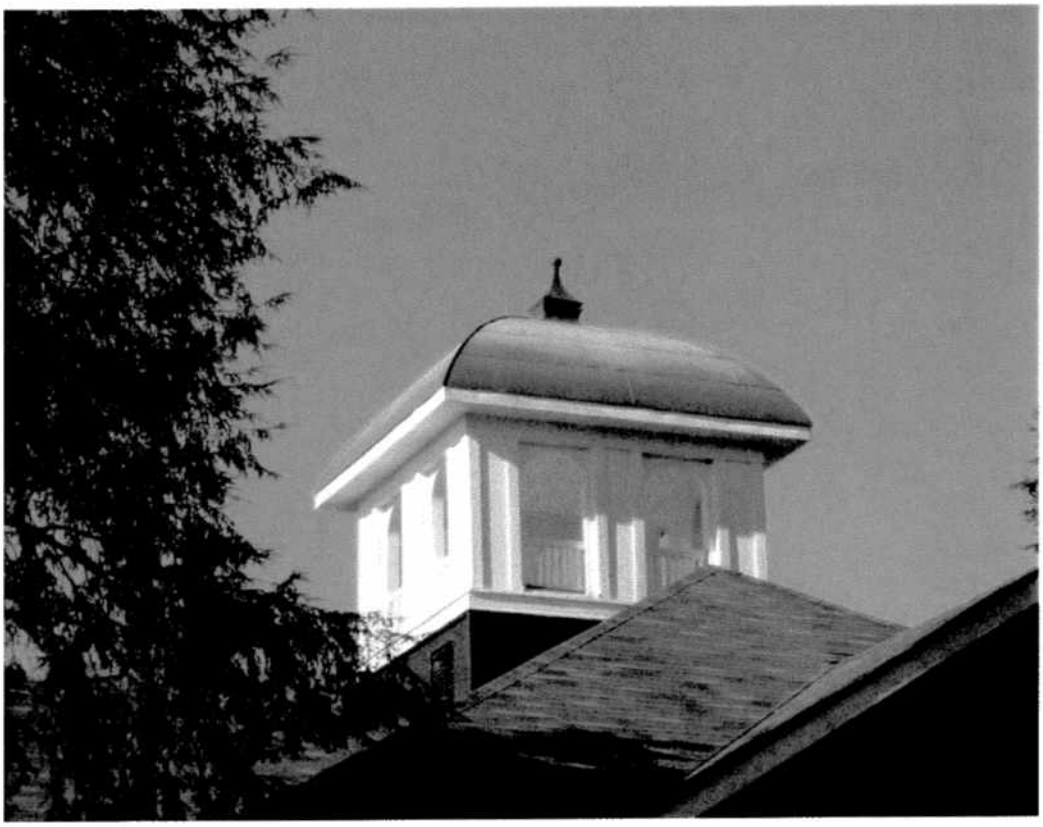


Photo 7. The cupola is constructed of wood with a copper roof. It is in good condition, although the wood surfaces have a heavy, alligatored paint build-up that will fail easily.

Photo 8. View of the roof at the southwest corner. The roof over the vestibules are flat and have been roofed with a membrane which is not tied into the asphalt shingles very well. This connection and possibly the valley have leaked in the past and while these have been temporarily repaired, these locations will leak again due to poor installation.

Photo 9. View of roof looking north. The chimney needs to be capped to stop water infiltration. The brick condition on the chimney is also not good and repairs are needed.

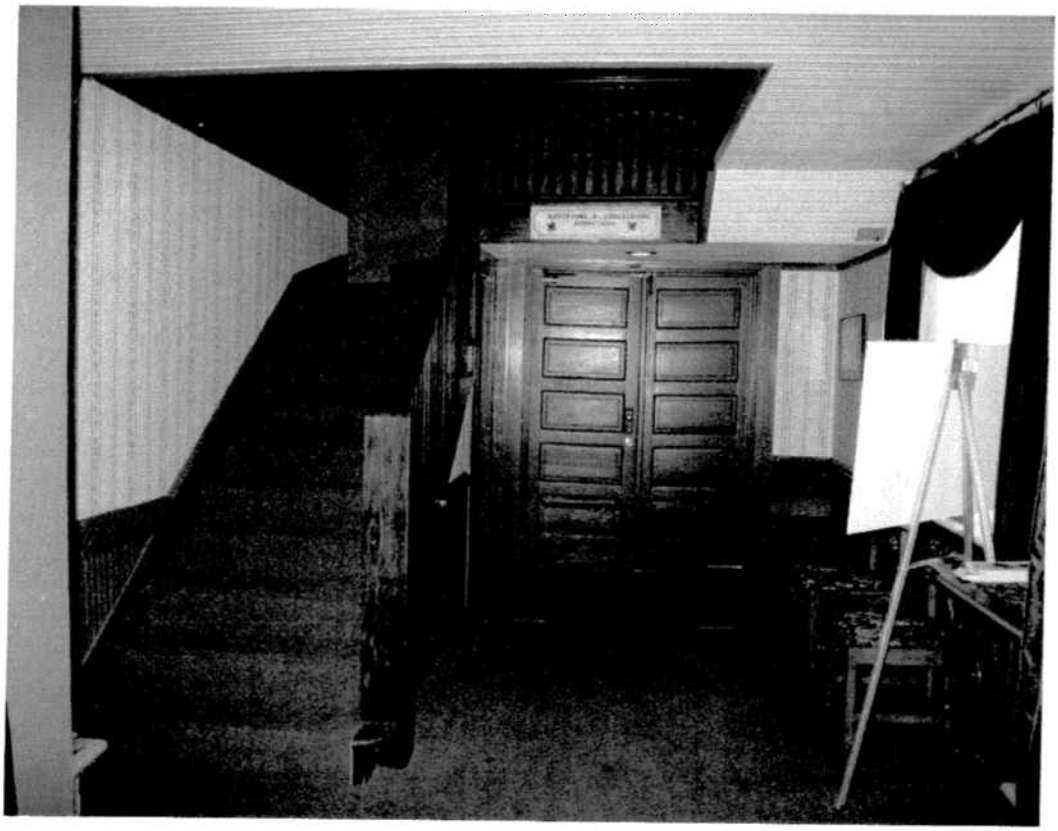


Photo 10. Entrance vestibule looking south toward the front doors. Note that the arched transom over the door becomes a window at the landing above. These have been covered over from the outside. The stairs and floors are original hardwood under the carpet.

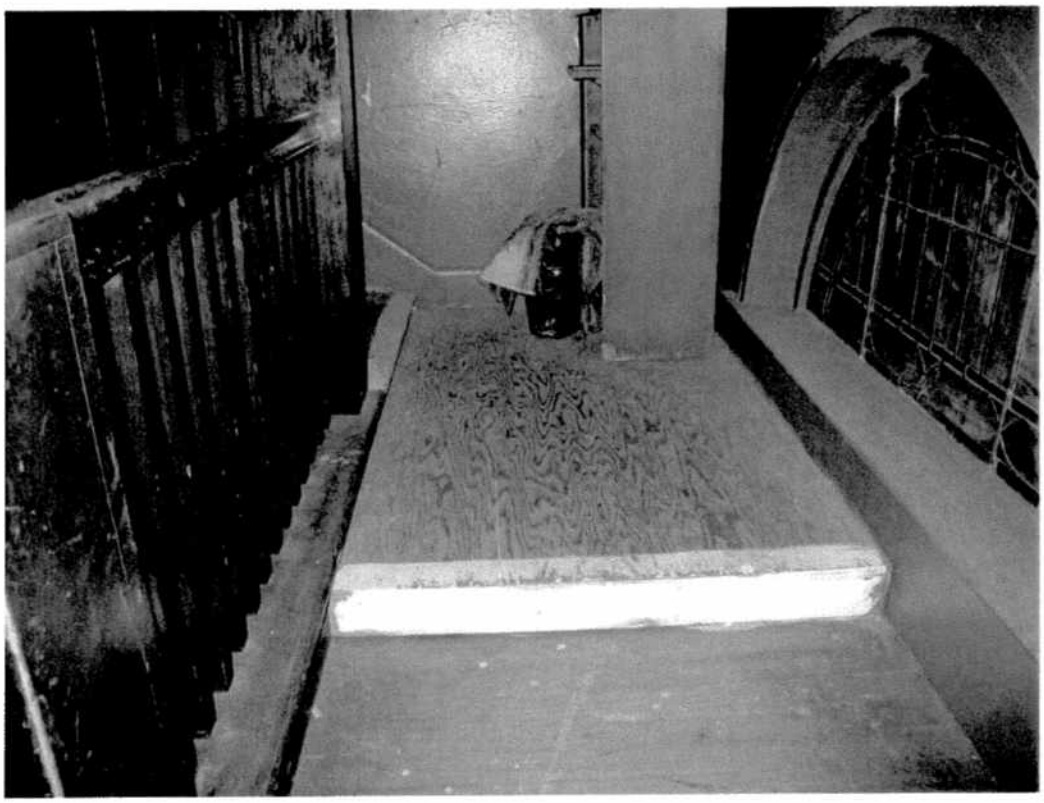


Photo 11. Landings at the main stairs have been built-up so that there is a step in the middle of the landing to accommodate a recessed light fixture underneath in the vestibule. This creates a dangerous situation. The light fixture and the added step should be removed. The original transom at the entrance doors is left in place, although it has been covered over on the exterior.

Photo 12. Water damage from roof leaks over stair in the vestibules.

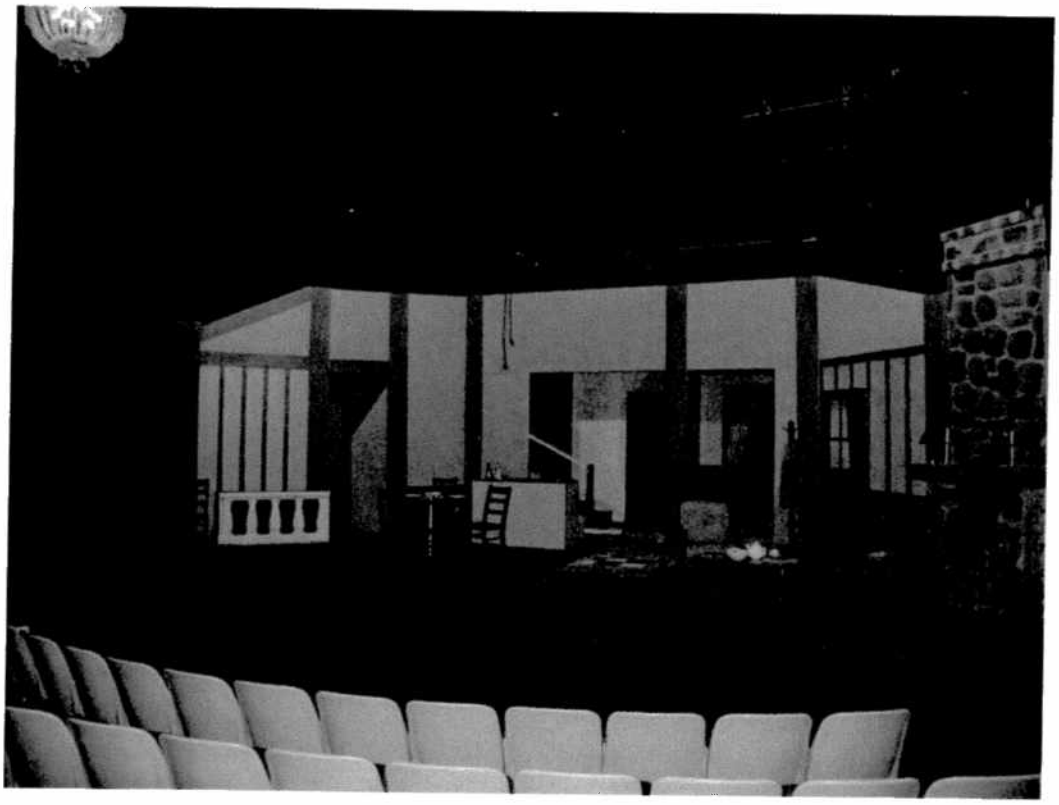


Photo 13. Interior of theater, located in the former sanctuary, looking north toward the stage. Pipes for lights and rigging have been added over the stage and are not engineered. See structural assessment.

Photo 14. Rear portion of the theater house, looking south. The curtains cover the original stained glass windows to block light into the theater.

Photo 15. Part of the backstage area, showing an area where walls have been left in place and floor conditions are dangerous. There are many different levels to the floor and different flooring materials.

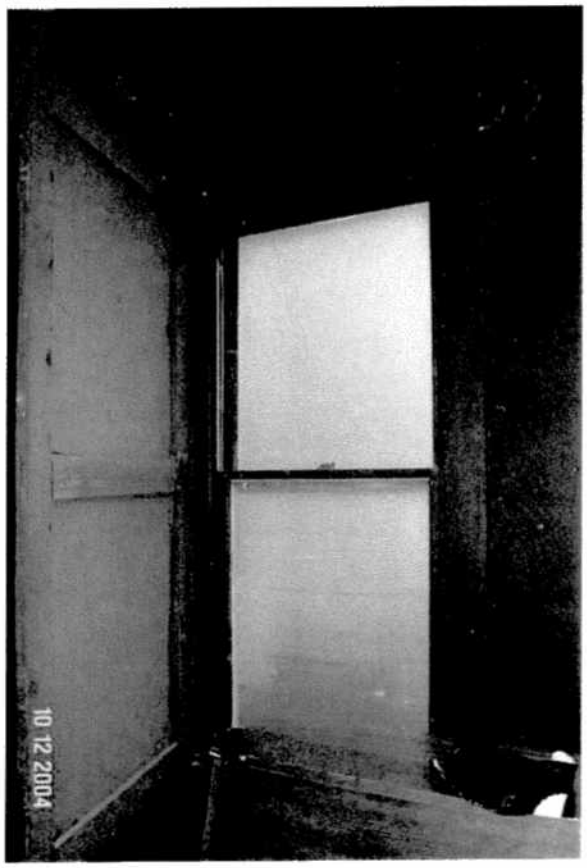



Photo 16. Typical of original windows left in place in the backstage area. Wooden shutters have been built to block light from entering. This is a good solution to leaving the original windows intact. Compressible weatherstripping could be added to the shutters to block additional light.

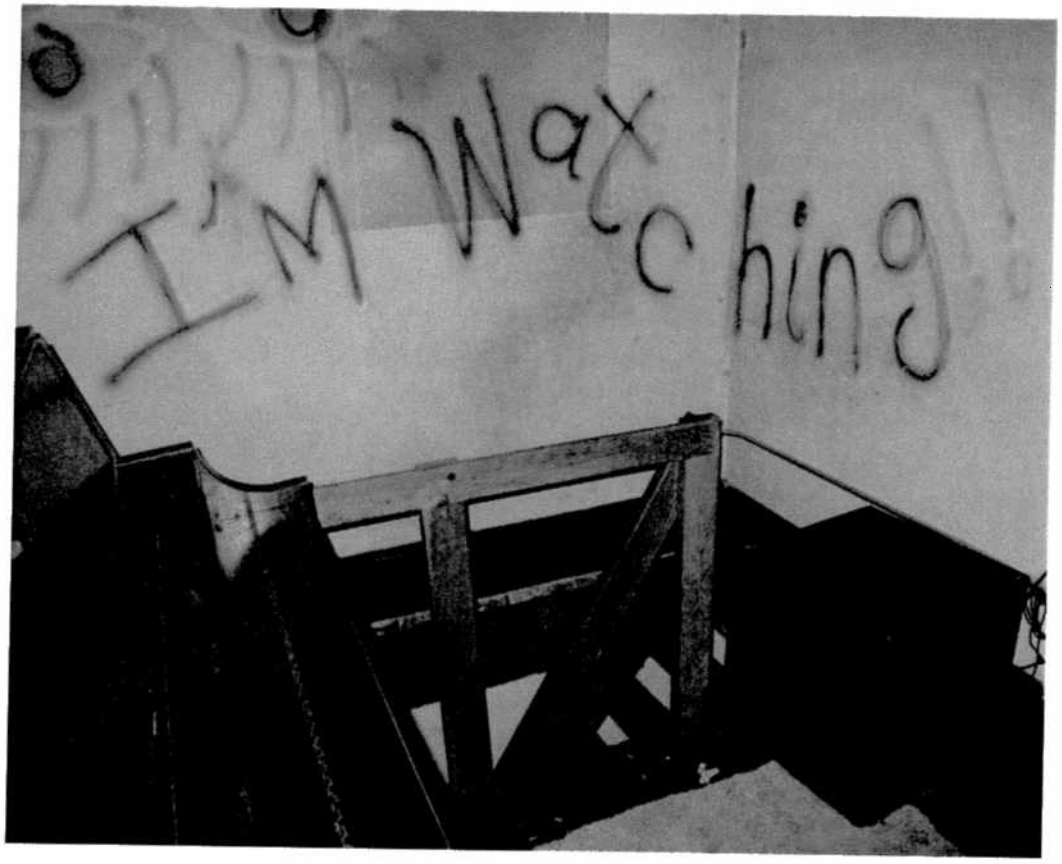



Photo 17. Back stage area with very steep stairs to the lower level with dressing rooms. Stair was added and is very dangerous.

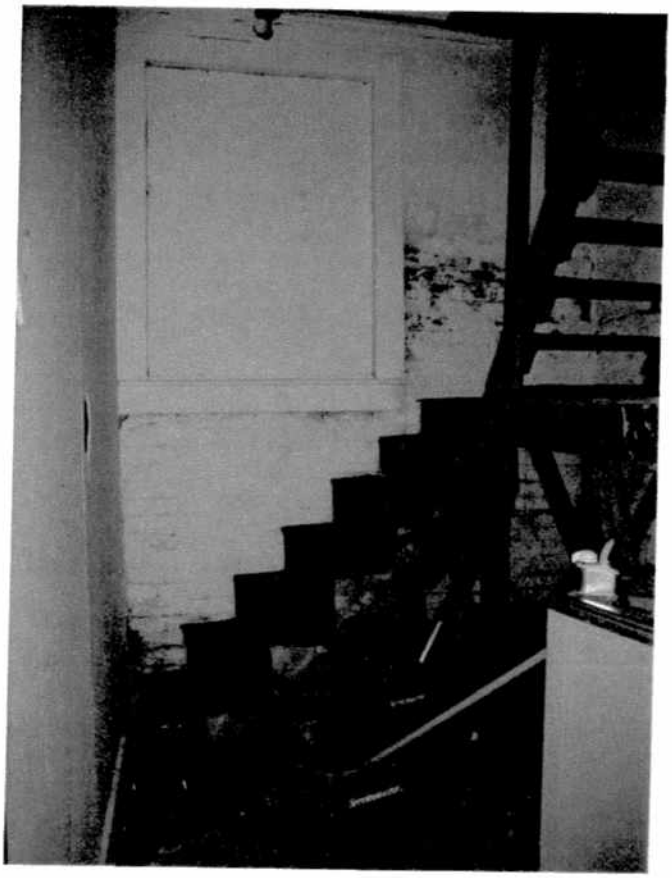


Photo 18. Bottom of steps to the stage area shown in photo 17. While access is needed for actors in this area, this stair is very dangerous and needs to be removed.

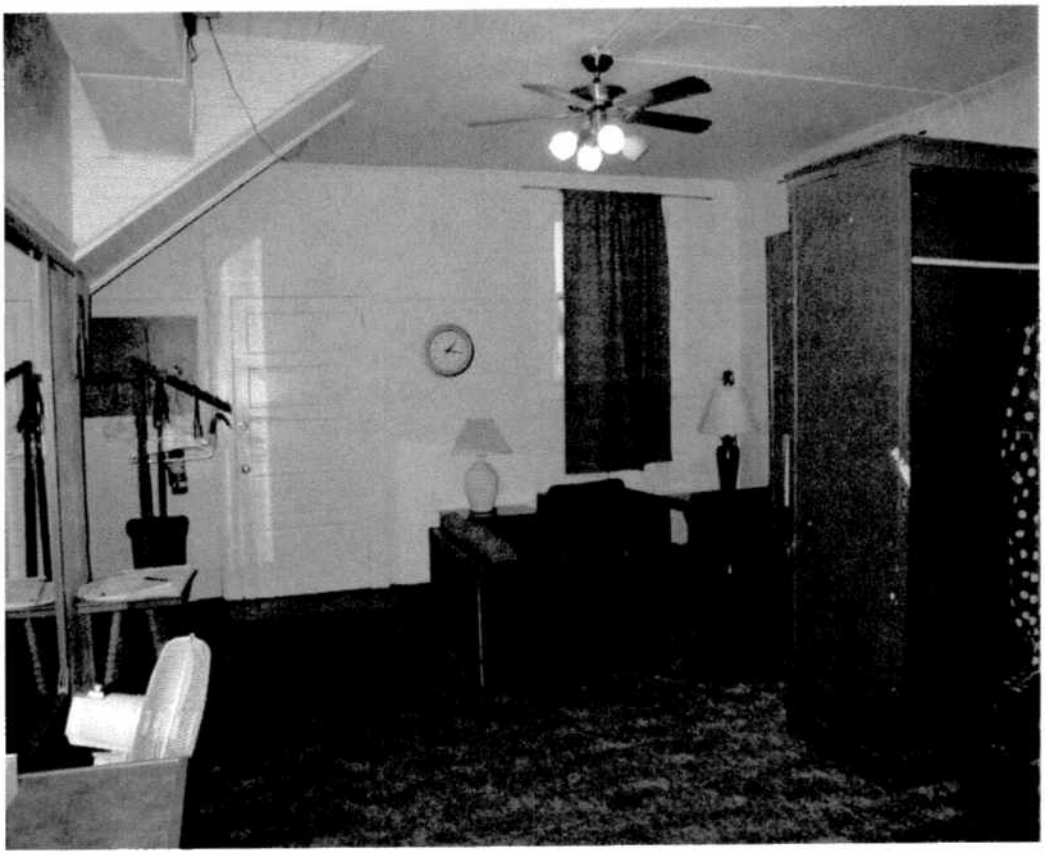


Photo 19. Area below the stage on the lower level, used for a green room, student lounge area and for a dressing room during productions.

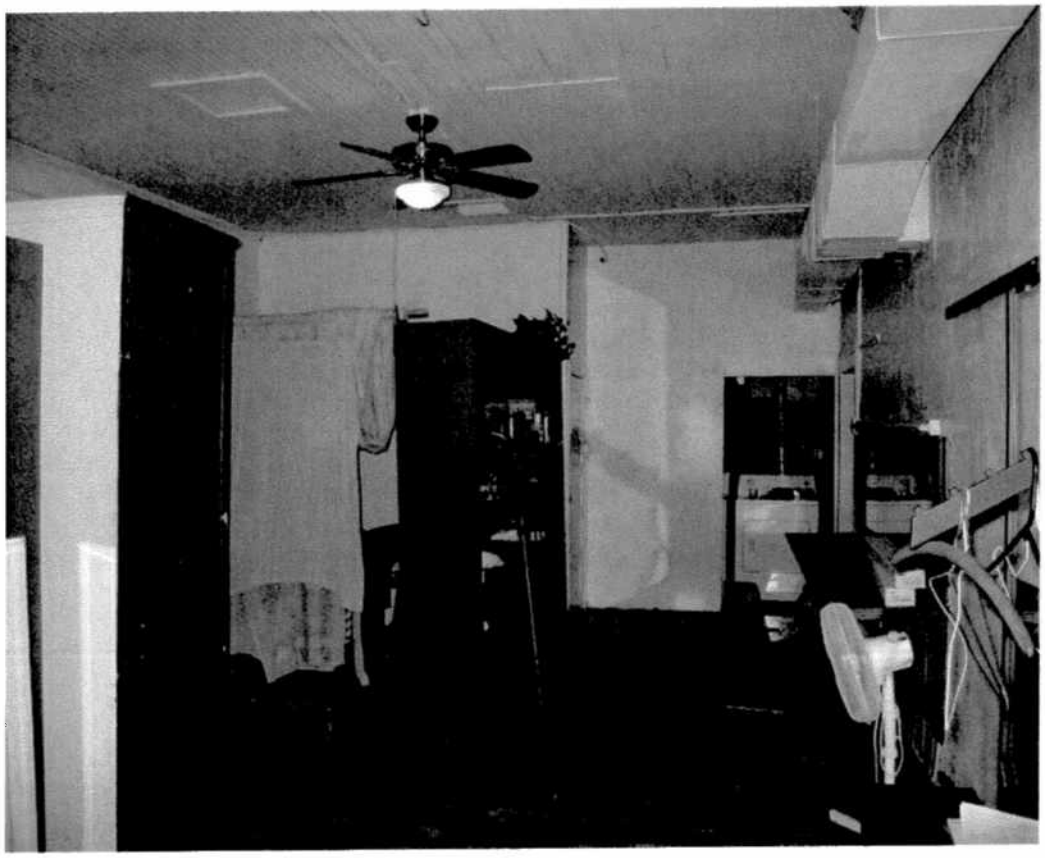


Photo 20. Green room and dressing area.

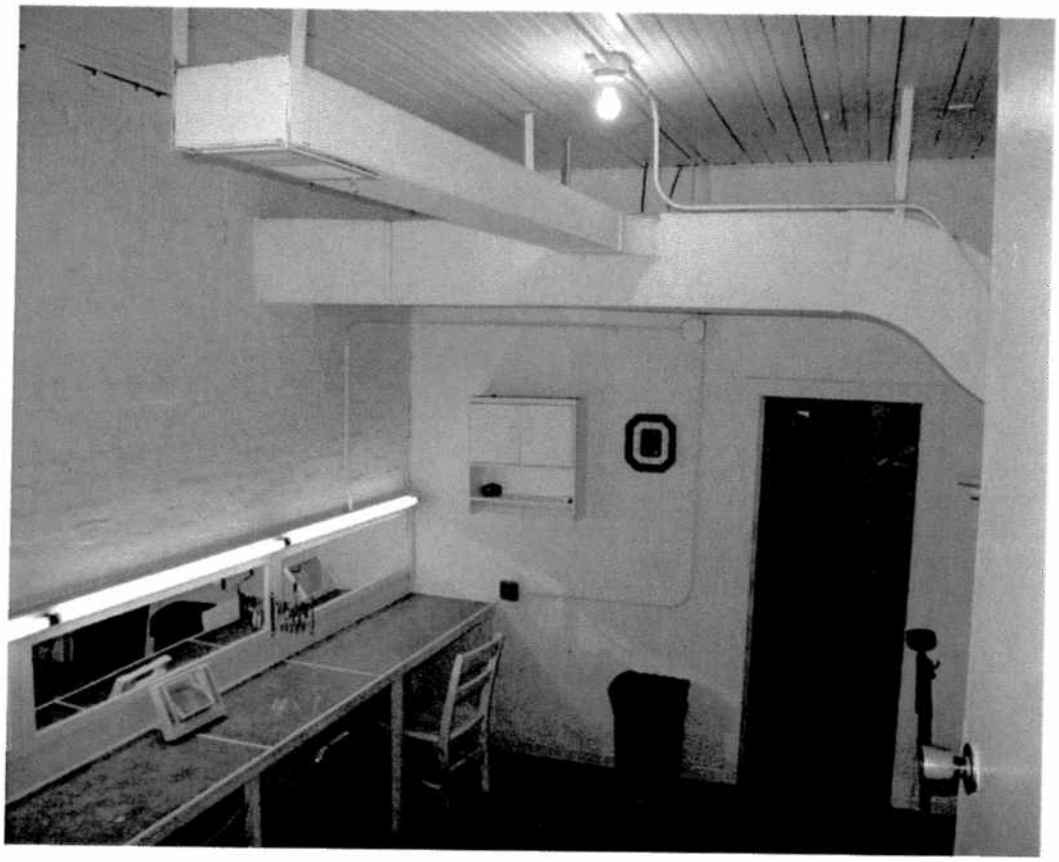


Photo 21. Green room and dressing area.

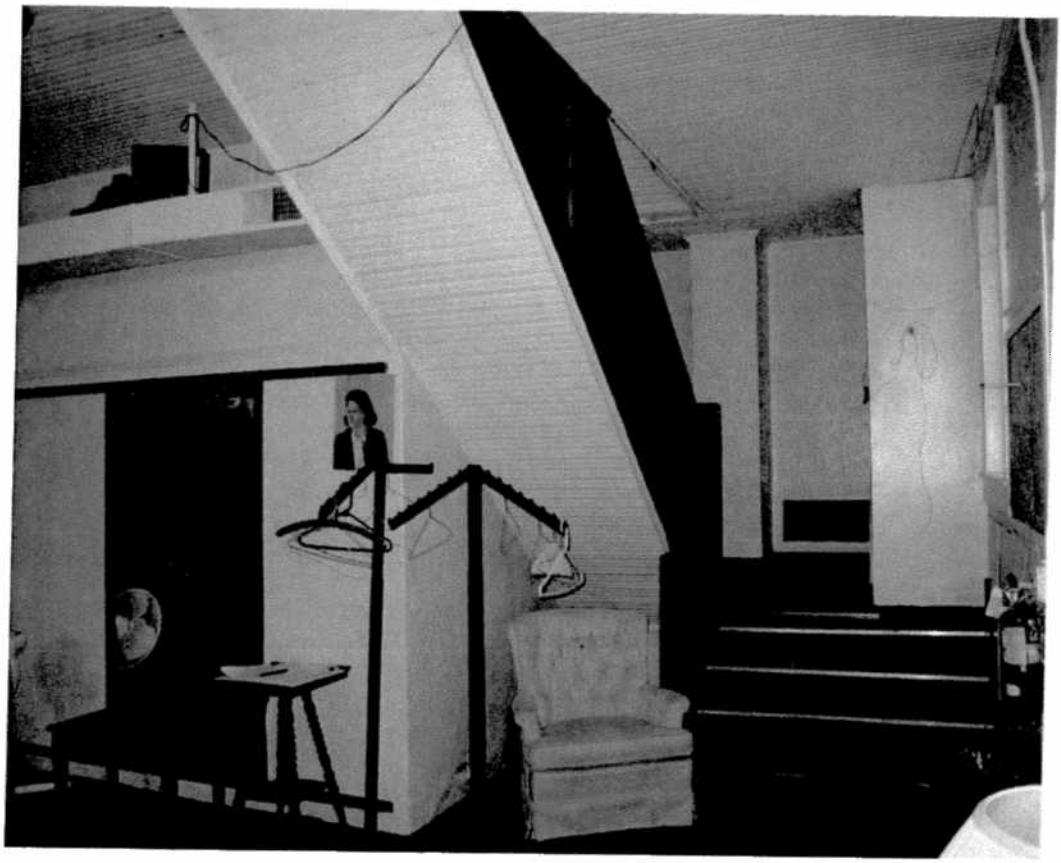


Photo 22. Main stair from the lower level up to the rear of the stage.

Photo 23. Lower level at the front of the building looking into a hallway with restrooms.

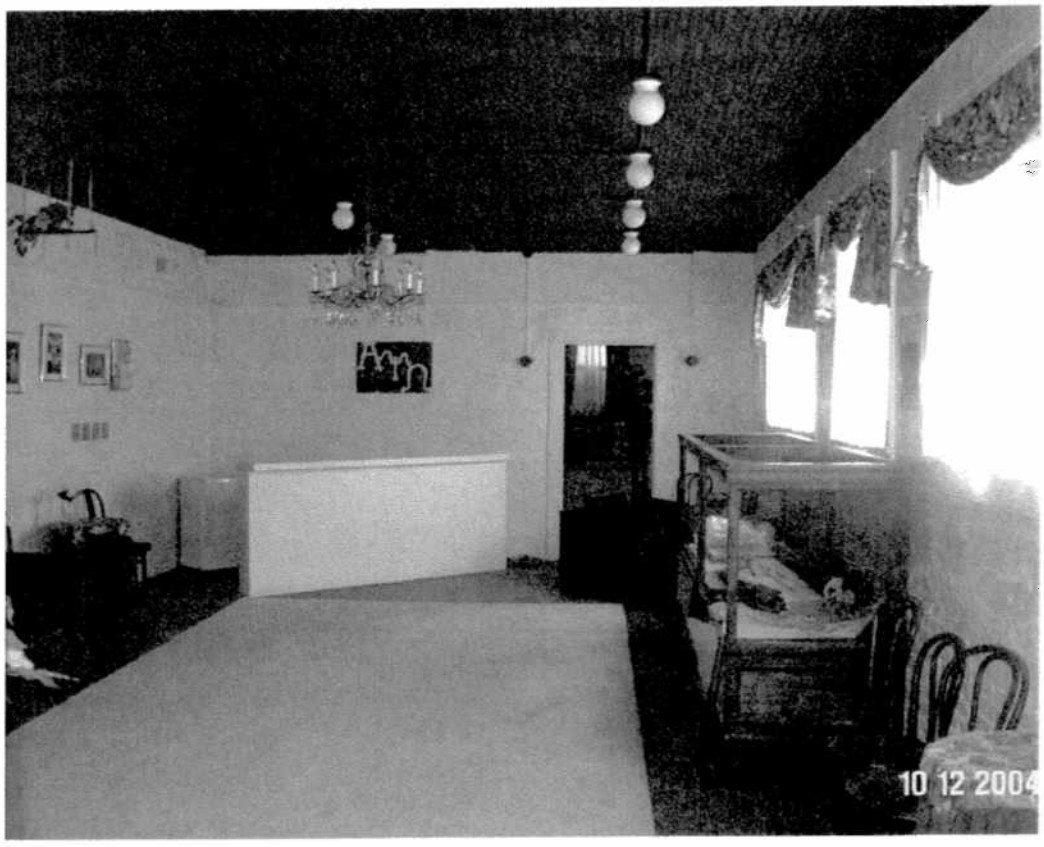



Photo 24. Lower level room used for concessions during intermissions and as a practice room.

Photo 25. Stair to dressing area, looking down toward lower level.

Photo 26. Sound and light booth, located in the original rear balcony area. Note the original ceiling and the original balcony risers remain. The upper portion of the stained glass window is blocked to the left and a partition wall was installed to the right to enclose the area.

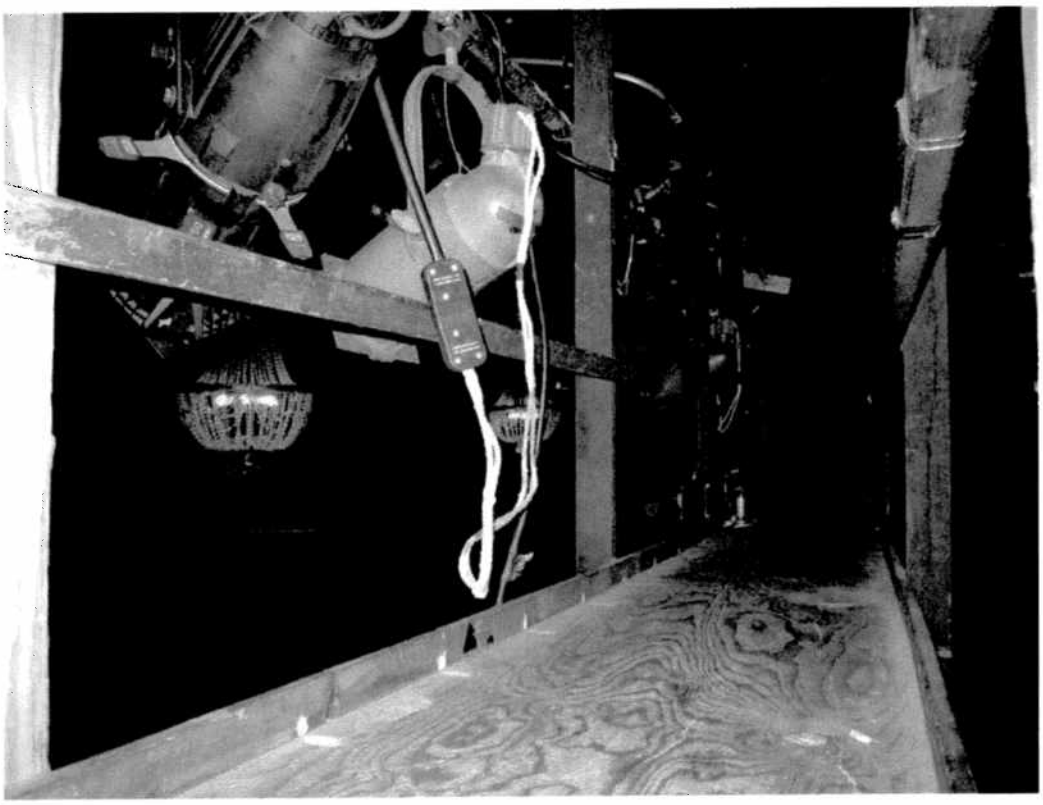


Photo 27. Lighting catwalk added at the rear of the theater.

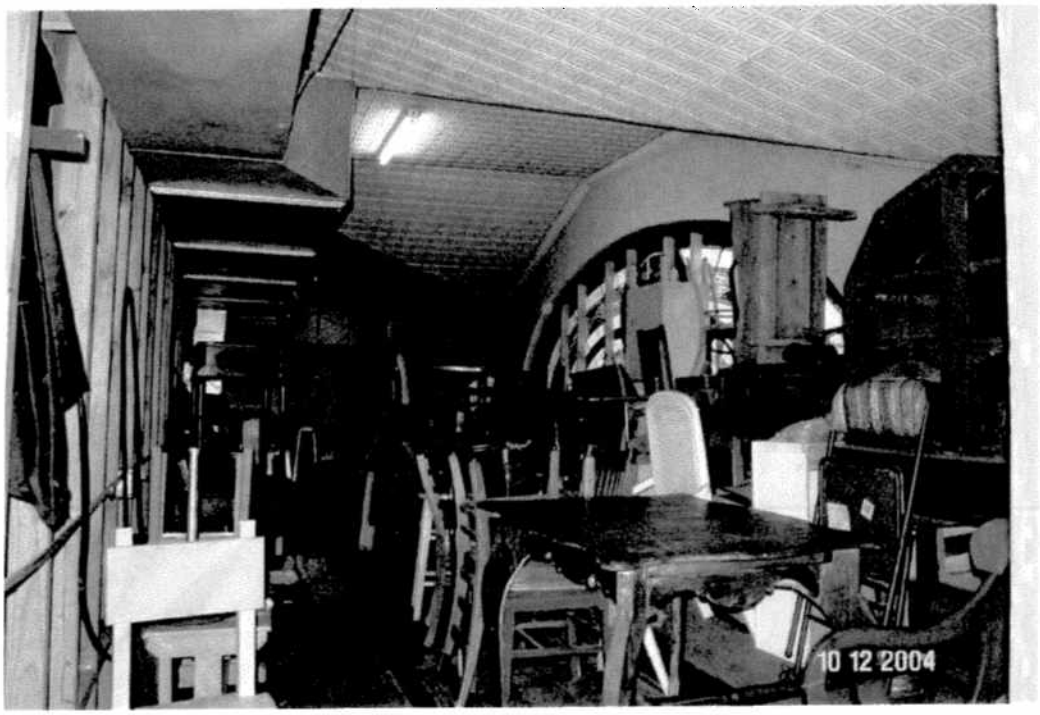



Photo 28. East side balcony used for storage. The original risers and tin ceiling remain and the stained glass window can be seen on the right.

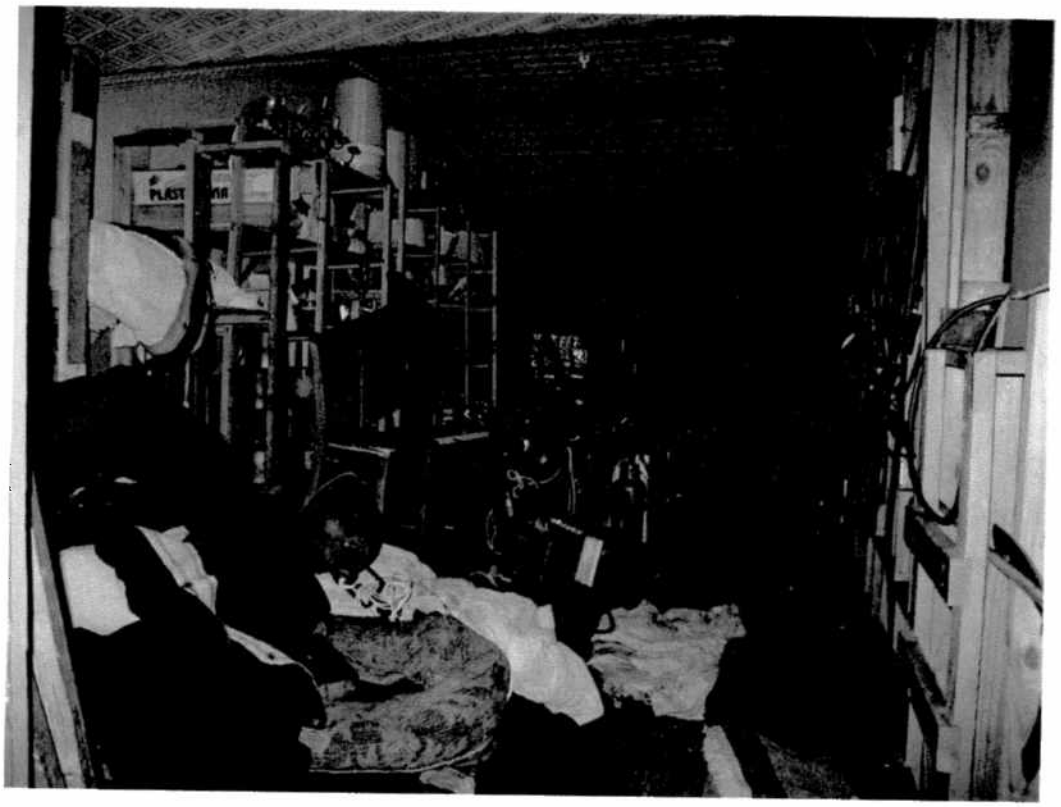


Photo 29. West side balcony used for storage. The original risers and tin ceiling remain.

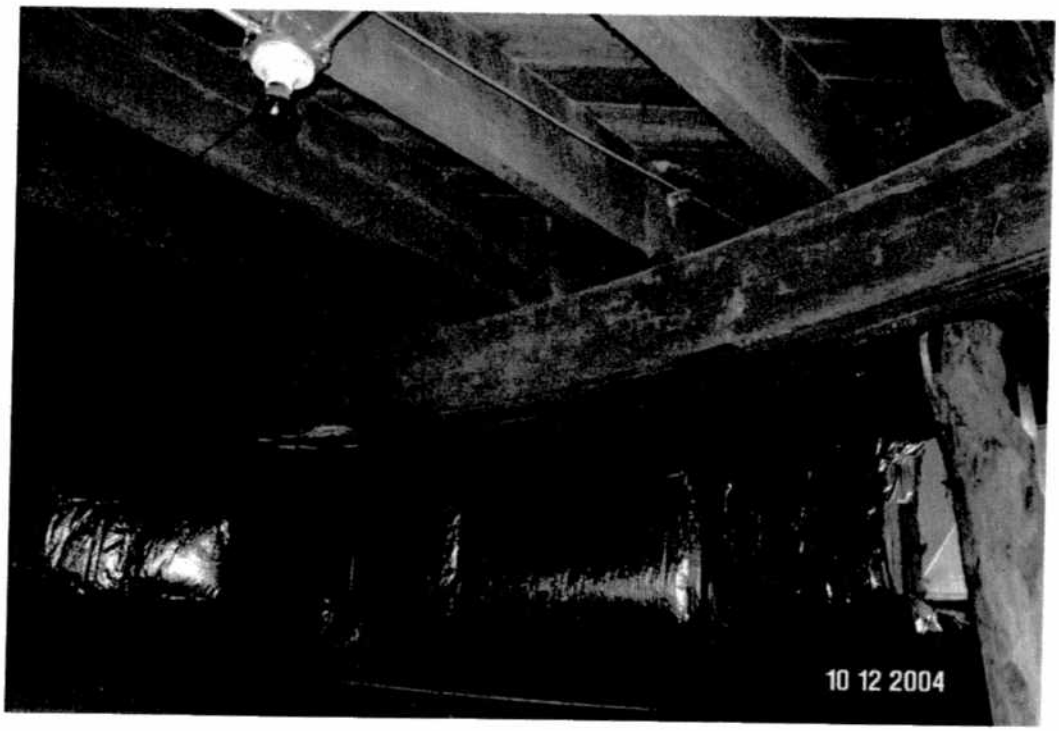



Photo 30. Framing under the stage and former altar with curved beam.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. It is composed of a wood framed roof, wood framed floors bearing on wood stud walls and brick bearing walls, and foundation brick walls with brick interior piers.

### Foundations

Foundation walls are brick with interior brick piers that likely have a footing made of another layer of brick or a thin layer of mortar. The lower level is partially habitable space, with a concrete slab-on-grade floor, and is partially crawlspace. Exterior grade is located at mid-height of the perimeter walls for a majority of the building.

### First Floor Framing

Floor framing is composed of wood sheathing on wood floor joists spanning between the exterior brick walls and interior wood beams which span between brick piers. The perimeter brick foundation walls have joist pockets. Curved wood beams can be seen in the crawlspace, under the stage above and are original to the construction of the building. It is assumed that this was the front edge of the original alter.

### Second Floor Framing (Balcony)

Second floor framing is composed of wood floor joists spanning between the exterior brick walls and interior load-bearing wood stud walls and wood beams. The wood stud walls and ceilings are covered with original lath and plaster.

### Roof Framing

The roof rafters are braced and supported by wood kickers, which are directed toward load-bearing walls and beams. Ceiling joists also span between load-bearing walls and beams. The ceiling joists and rafters are being used to support theatre accessories such as lighting and curtains.

### Structural Observations, Evaluations, and Recommendations

There are two categories of structural problems listed in order of importance:

1. Theatre accessories such as lighting and curtains have failed some members.
2. Failure to direct water away from the foundation of the building.

In the attic, one of the mesh screens has been removed allowing animals to enter the structure. Water damage was also observed in several local areas. From the roof, it appears several attempts at repair have occurred. No flashing was observed which may contribute to water leaks. One roof gutter was clogged with vegetation and should be cleaned to eliminate water buildup and decay of the soffit members.

In the basement, at the interface of the habitable space and crawlspace, the wood stud walls have soil in direct contact with non-preservative treated wood framing. The building code requires wood in contact with soil to be preservative treated to prevent rotting and decay. Existing non-preservative treated wood in contact with soil should be replaced with treated wood.

The exterior brick requires maintenance in several areas. Along the front of the building, one of the gutters overflows such that water has eroded the brick joint mortar. The gutter should be repaired and the brick repointed. Along the front entry stairs, mortar has eroded, bricks have become dislodged, and the footing has cracked.

In the crawlspace, two columns consist of tree trunks. The building code does not allow this type of construction. The columns should be replaced with preservative treated 6x6 timber columns.

The chimney has no cap which allows water to enter the building.

**Weakened or Failed Members**
Several ceiling rafters directly over the stage have withdrawn from the supporting beam due to excessive loading from the stage lighting. These members should be repaired or strengthened to carry the lighting fixtures.

In the attic, many individual members have not failed; however, the cumulative load at each member appears to be failing the main beam directly over the stage and the main beam over the sound room window. This is evident by the crushing of the plaster at the end of each beam. The plaster should be removed for a better inspection. Wood has a very high shear capacity that is the governing force at the ends of these beams thus indicating severe overloading and failure of the member.

General prolonged exposure to moisture has weakened or failed members. The brick mortar joints in several areas, primarily where water is directed against the foundation, have deteriorated and need to be re-pointed. A parge coat of concrete has been added to the lower courses of bricks at some later point in time. This will help, but the drainage towards the structure should be eliminated to prevent excessive hydrostatic pressure behind the basement walls.

The front entry stairs exhibit cracks and settlement likely due to soil erosion and water accumulation around the base of the stairs. One stair wing wall foundation footing has failed and is dislocated vertically and horizontally.

**Summary**
The structure exhibits significant signs of distress due to its current use in several areas. We recommend replacement, repairs, and strengthening of the afflicted areas. Failure of secondary members such as joists or rafters is typically a minor concern; however, failure of a primary member such as the beams over the stage and sound room can have catastrophic results.

The primary maintenance problem affecting the structure is drainage of water away from the structure. Gutters clogged with vegetation, downspouts draining directly against the building walls, and exterior grade directing water against the building foundation were observed.

## BUILDING SYSTEMS ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC.

### HVAC Systems

A ground-mounted packaged 10-ton air conditioning unit with natural gas heat provides heating and cooling for the main portion of the building. Dressing rooms on the north end of the building, and the basement level lobby and ticket office area on the south end of the building, are served by two duct-mounted blowers with electric heaters. There appears to be no ventilation for any of the basement area, including the toilet rooms near the ticket office, the lobby/concession room, or the dressing rooms/green room area. There is also no ventilation for the control room, where the stage lighting dimming system is housed.

Recommendations:

- Install an exhaust system for the basement area.
- Replace the existing blowers with electric heat, with split systems with gas furnaces.
- Install ventilation for the control room.
- Verify operation of economizer cycle on the packaged ground-mounted unit, and add a carbon dioxide sensor and demand control ventilation cycle for the theater proper.

### Electrical System

Electrical service is provided underground from a pad-mounted transformer located to the northeast of the building, to a conduit that runs up the exterior on the east side of the building to a distribution panel located in the control room. The cover has been removed from the distribution panel, apparently to allow theater staff to make taps inside the panel to support various productions. Electrical distribution in the building is in reasonable condition, but there are insufficient electrical outlets in the ticket office area. Stage lighting and dimming systems appear to be in good condition. Aisle lighting in the theater is not provided from an emergency source. There is no automatic fire alarm system.

Recommendations:

- Provide a proper "road show" outlet and disconnect in the control room, and reinstall the panel cover, as a safety measure.
- Provide a small emergency power inverter to provide aisle lighting in the case of an emergency.
- Provide a complete fire alarm system.

### Plumbing Systems

Existing plumbing systems consist of water, waste, and vent systems, all of which are in need of upgrade. Water service enters the building in the basement dressing room area on the east side of the building, behind the washing machine. It is not clear where building sewer exits the building. Hot water is provided by an electric water heater. The building is not sprinkled. Plumbing fixtures are not water-saving type, and generally do not meet accessibility codes. The number of plumbing fixtures is addressed in the Architectural portion of the report.

Recommendations:

- Replace all plumbing piping and fixtures.
- Reuse existing electric water heater to provide domestic hot water.
- Provide a fire sprinkler system.

**PROPOSED REHABILIATION AND ADDITIONS**

The building is in need of general repair, correction of unsafe conditions, and additional space for both set construction and for patrons. The general use of the building will remain the same.

Proposed additions to Owen Theatre have been considered by the administration in the past, but the concept was discarded due to an understanding that additions cannot be made to the building without bringing the entire building up to code. Constructing additions and rehabilitation of the theater was considered too expensive for the college to undertake at one time, although this is precisely what this Preservation Plan recommends. The recommendations set forth in this report are based upon the following:

1. The building is well liked by the theater department, SART, and patrons. They like the size and feeling of the theater, which has been described as intimate. The number of seats is sufficient.

2. The building is generally sound and is in an excellent location on campus.

3. Through interviews with Neil St. Clair, the head of the theater department and other faculty members we learned that having a set shop in another building (Spilman Hall) and inadequate facilities for patrons are the biggest problem in mounting productions.

4. Jarrett House has been designated for use by the theater department. While a preliminary proposal has been made to renovate the house and construct additions to house a ticket office, black box theater, and ticket sales, it is our professional opinion that this is not a good use for Jarrett House. The proposed alterations would not be in keeping with preservation standards and would alter the house to such an extent that it could possibly loose its historic status. (See Preservation Plan for Jarrett House.)

**BUILDING CODE ASSESSMENT**

The existing building was evaluated under the 2006 NC Rehabilitation Code. New additions must be designed to need the 2002 NC Building Code with 2006 revisions. (See the Introduction for additional code information.)

It should be noted that one of the main consideration of renovating Jarrett House as a public support facility for the theater has been the past understanding that additions could not be made to the theater without bringing the entire theater up to code. It is our understanding however, which was confirmed by the Madison County Building Inspector, Ryan Cody, that this is not correct. Following is a portion of an email sent to Mr. Cody on March 9, 2005, confirming this matter. He confirmed that these statements are correct.

> *When additions are made to existing buildings, the addition must be designed and constructed in accordance with current codes. The existing building can remain as it currently stands if no alterations are made to the existing building, with the exception of the work required to tie the new building in to the old. This may include a doorway between new and old sections. It should be noted, however, that the existing building cannot be made to be more hazardous by the addition. If any alterations are made to the existing building, then any work related to the alteration must meet current codes. If 75% or more of the existing building is impacted with renovation work, then the entire building must be brought up to meet code.*

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**Current and Proposed Use**

Use Group A-1: Assembly with fixed seats: 200 occupants (current seating).

**Construction Type**

Type III-B: Exterior walls of non-combustible masonry, interior floor and roof structures of combustible materials (wood).

**Historic Certification Provisions**

Building is eligible for the National Register of Historic Places as contributing to the Mars Hill College Historic District. Listing on the National Register allows for special provisions under NC Rehabilitation Code Section 1.33 – Historic Buildings.

**Code Provisions**

The following assessment of the existing building and requirements refer to the NC Rehabilitation Code Section 1.12 (Use Group A-1). This list includes the primary requirements; the code should be reviewed for additional items.

1. Exits: Minimum of two exits required for each story; Doors must swing in the direction of travel (out) and have panic hardware. (§1.12a)
2. Means of Egress Lighting: One foot candle at the floor with emergency back-up, can be dimmed to not less than 0.2 foot candles during performances. (§1.12e)
3. Illuminated exit signs are required at exits with emergency back-up. (§1.12f)
4. Vertical Opening Protection (around stairs): Not required, only two stories. (§1.12i)
5. Plumbing Fixtures: Refers to NC Plumbing Code, table 403.1 (revised July 1, 2006). Based upon occupancy of 200 people. *(Note that these requirements are significantly lower in number from the previous code. This count does not seem adequate for a theater of 200 people. Recommending this number in the proposed addition as well as keeping and upgrading the current public facilities in the basement.)*
   - Women: two toilets and one lavatory.
   - Men: one toilet, one urinal, and one lavatory.
   - Drinking Fountain: one.
   - Service sink: one.
6. Automatic Fire Suppression System (Sprinklers): Not required as the building is less than 12,000 SF. (§1.12Aa)
7. Automatic Alarm System: Required if entire building is rehabilitated. (§1.12Ab)
8. Manual Fire Alarm System: Not required, less than three stories. (§1.12Ac)

## PROPOSED SCOPE OF WORK

General repairs and new finishes are recommended for Owen Theatre as well as two additions to accommodate the needs of constructing sets and the comfort of patrons.

### Exterior Repairs

- Clean, repair and repoint brick.
- Regular inspections of the roof to be proactive about repairing leaks; replace roof as needed.
- Repair wood doors and windows.
- Replace front stairs with landing at the top.

### Interior Repairs

- Remove rear stair to backstage area; replace with proper circular stair.
- Repair backstage areas, especially to even out floors.
- Upgrade public spaces:
  - Replace floor coverings.
  - Repair damaged wood and plaster.
  - Prep and paint walls, ceilings, and trim.
  - Construct shadow boxes at stained glass windows; new drapes.
- Structural.
- Replace pipe supports over stage.
- Electrical:
  - Upgrade service for improved production lighting.
  - Upgrade general lighting.
  - Remove lights at entrance doors; restore landing stairs above; replace with new light fixtures for vestibules.
- HVAC:
  - Upgrade system and additional equipment for additions.

### Additions

- Lobby addition to include lobby, multi-purpose room, box office, concessions, and restrooms; designed to be accessible from the parking lot around Jarrett House.
- Rear addition to include a Scene Shop with support spaces that will be at stage level. This will allow for more complex and larger scenery to be constructed for productions, which are currently limited by the size of the front doors of the theatre. A loading dock on the east side the building will allow for deliveries of materials and loading and unloading of sets and furniture. A lower level is proposed for set and prop storage and will also have a loading dock and door facing Bailey Street.

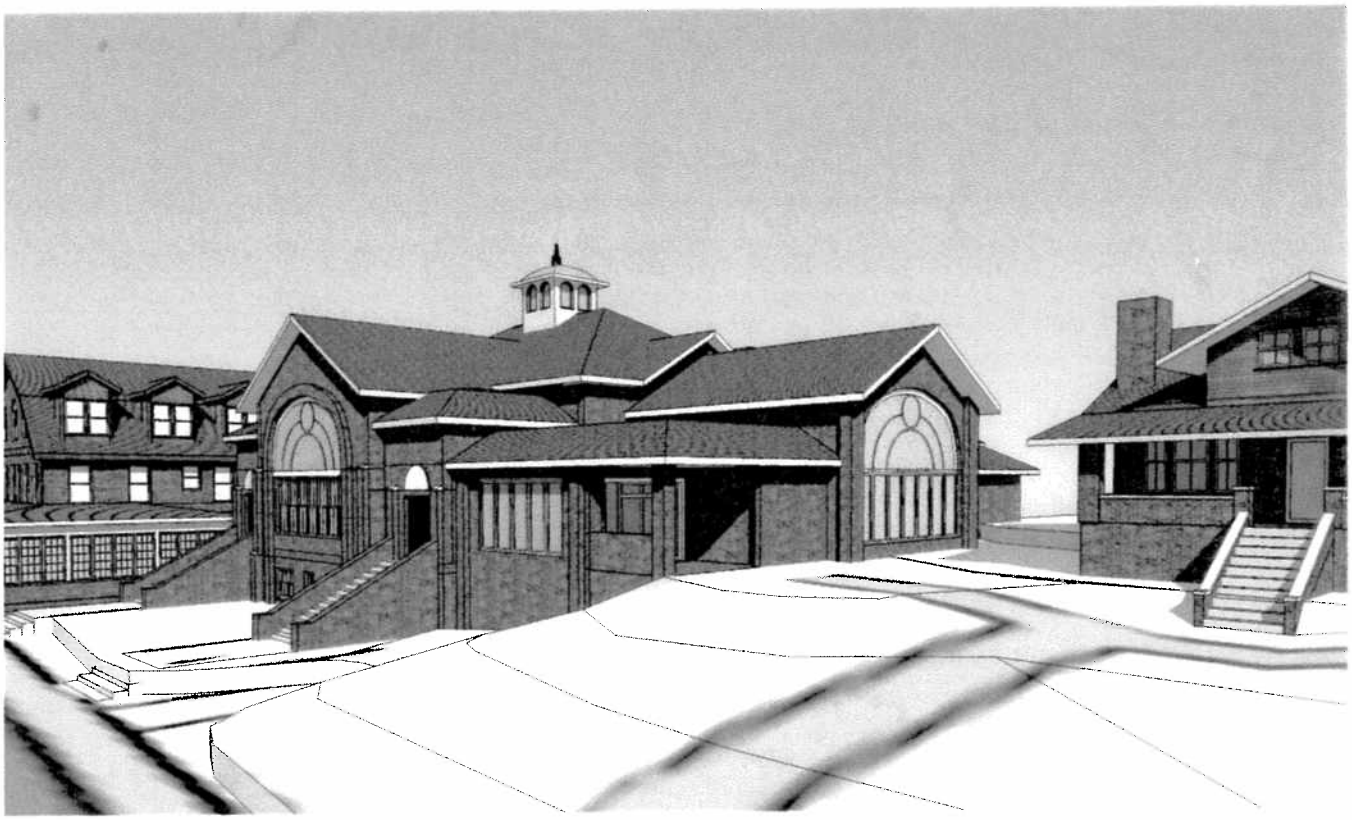

Figure 1. Perspective view of the proposed Lobby addition at the front of the building.

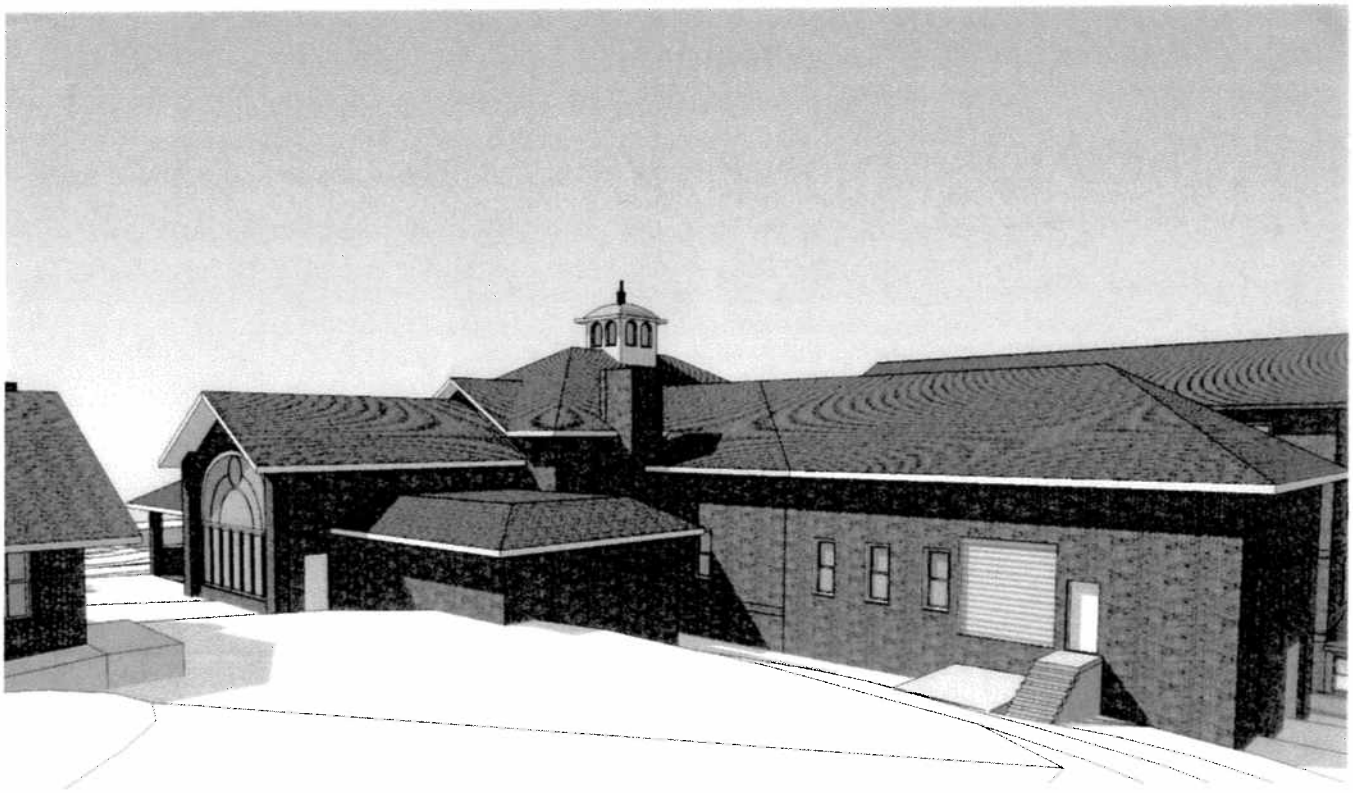

Figure 2. Perspective view of the proposed additions from the rear of the building.

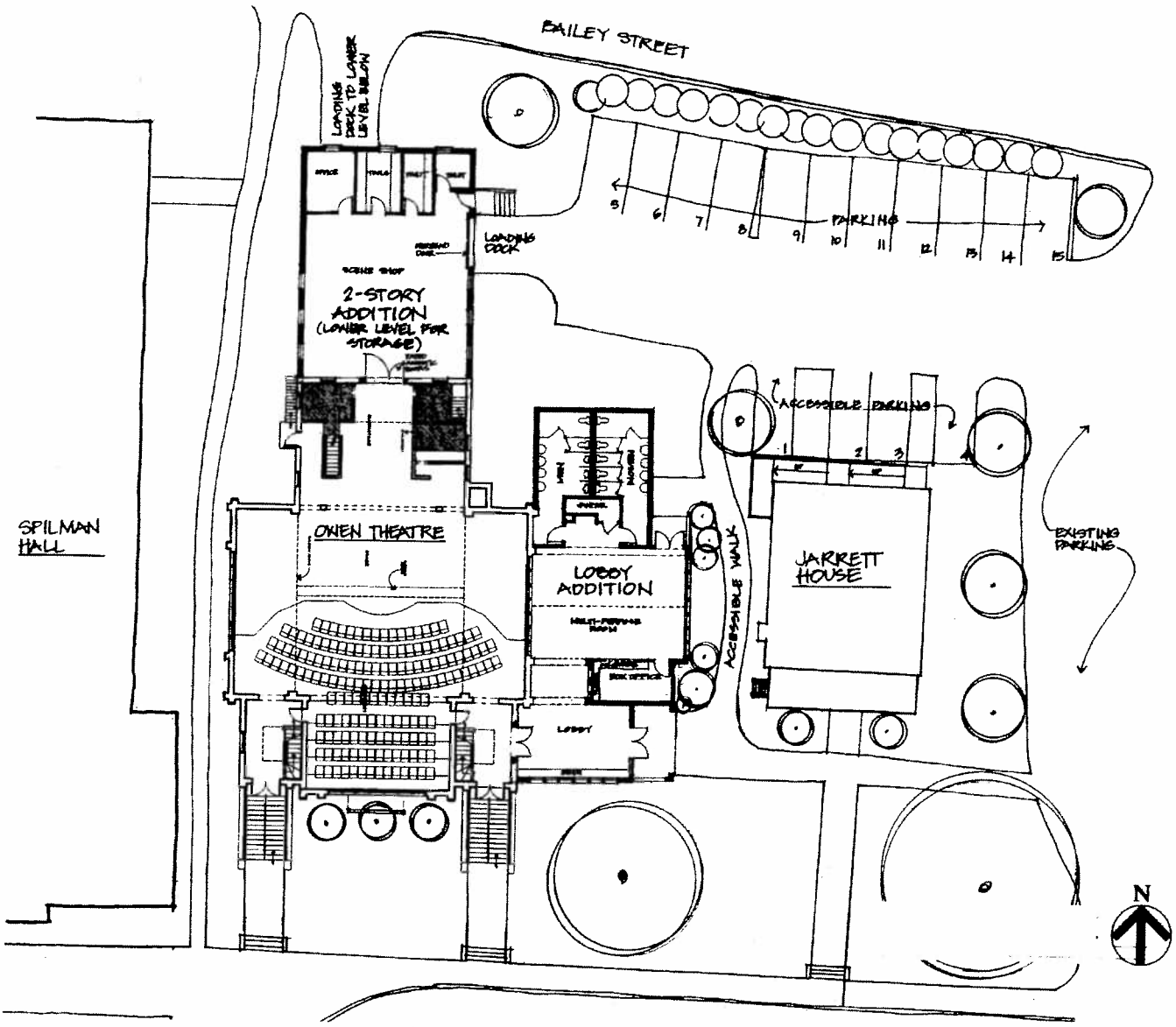


Figure 3. Proposed site and first floor plan indicating development of the site with additions.

**COST ESTIMATE**

A preliminary statement of probable costs totals $1,737,450 for all of this work. This total can be divided as $1,041,450 for rehabilitation of the theatre, $358,500 for the Lobby Addition, and $337,500 for the Shop/Storage Addition. Much of the cost for the proposed work on the theatre includes upgrading of the electrical system and associated repair of finishes. This includes a great deal of plaster and finish repair work that can possibly be reduced upon further study.

**Notes**

[1] Mars Hill Baptist Church history from the book, From These Stones, Mars Hill College 1856-1967 by John Angus McLeod, pp29, 262-263.

EXISTING
BASEMENT PLAN
SCALE: 1/8" = 1'-0"

N

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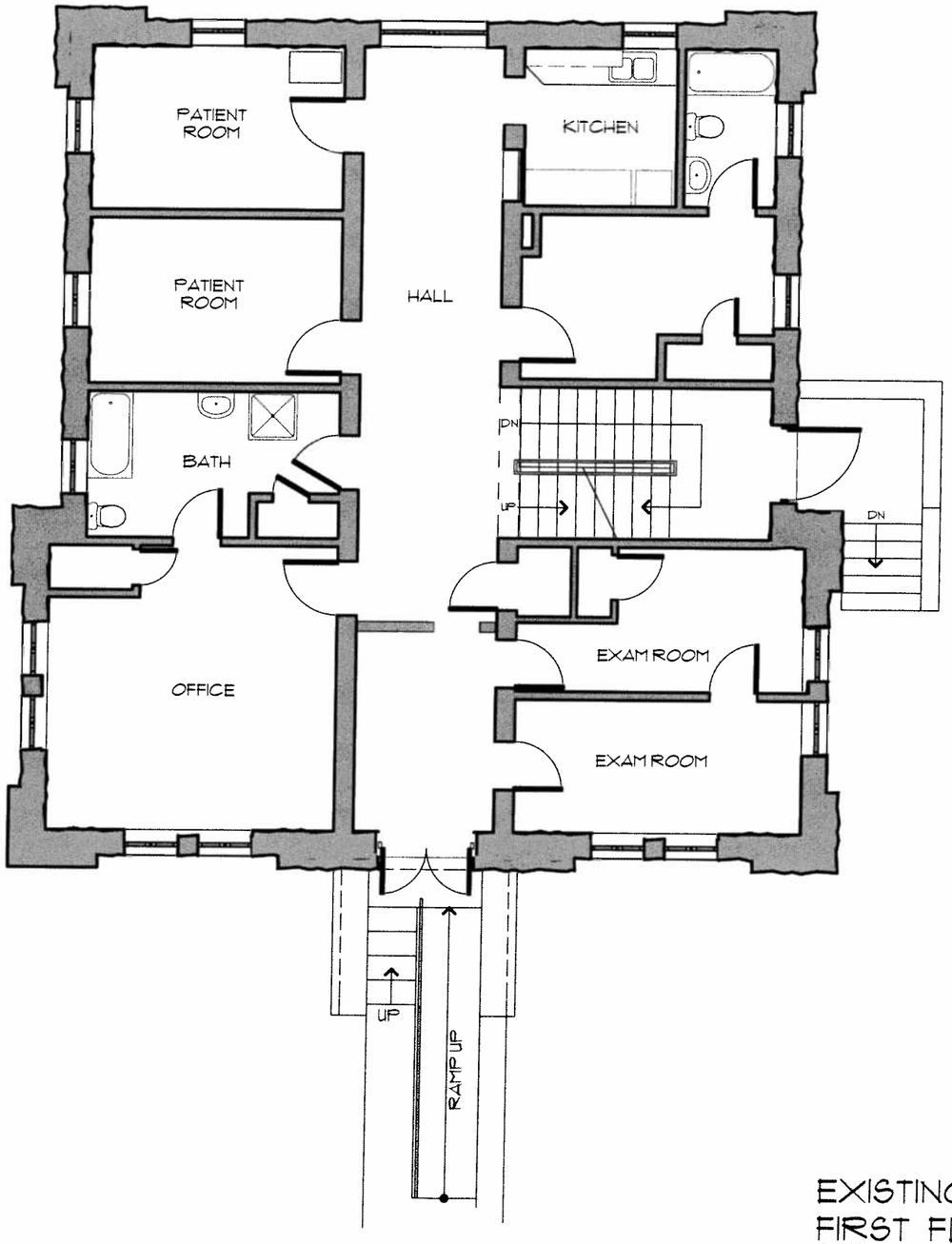
# ROBINSON WELLNESS CENTER

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
BASEMENT
PLAN




EXISTING
FIRST FLOOR PLAN
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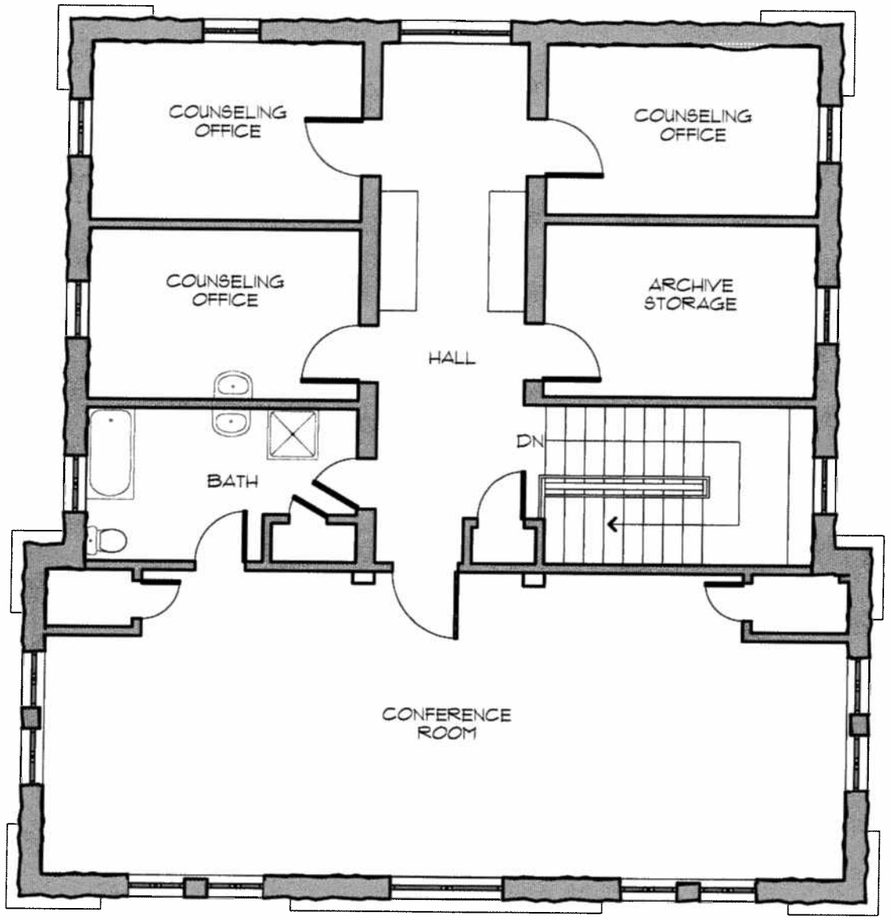
FLOOR
PLAN




EXISTING
SECOND FLOOR PLAN
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MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING SECOND FLOOR PLAN

MECHANICAL
3 x 6-8
AH
NEW HVAC EQUIPMENT
WH
REMOVE EXISTING MASONRY WALLS AT OLD COAL BIN
STORAGE
BIOHAZARD & EQUIPMENT
3 x 6-8
RAMP DOWN
NEW LANDING AND RAMP TO PARKING LOT
REPLACE EXISTING 32" DOOR WITH 34" DOOR WITHIN EXISTING MASONRY OPENING TO COMPLY WITH CODE FOR 32" CLEAR OPENING. CONSTRUCT DOOR TO MATCH FRONT DOORS.
NEW ELEVATOR
NEW DOORS ON HOLD OPEN TO SEPARATE NEW ELEVATOR LOBBY FROM STAIRS
LOBBY
NEW OPENINGS TO CREATE NEW ELEVATOR LOBBY AND CORRIDOR TO STAIR
3 x 6-8
NEW RETAINING WALLS WITH SLAB FLOOR
6'-7"
REMOVE DOOR AT BOTTOM OF STAIR AND ENLARGE OPENING
UP
REPLACE DAMAGED FRAME AND DOOR WITH METAL FRAME AND DOOR
6'-7"
NEW DOORS
INSTALL GRAB BARS
NEW DOOR WITH ACCESSIBLE HARDWARE
UNISEX TOILET
3 x 6-8
UP
CRAWLSPACE
ABATE ASBESTOS FROM PIPING
ATHLETIC PHYSICALS / STORAGE
EXCAVATE AND WATERPROOF BASEMENT WALLS BELOW GRADE

# PROPOSED BASEMENT PLAN

SCALE: 1/8" = 1'-0"

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MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

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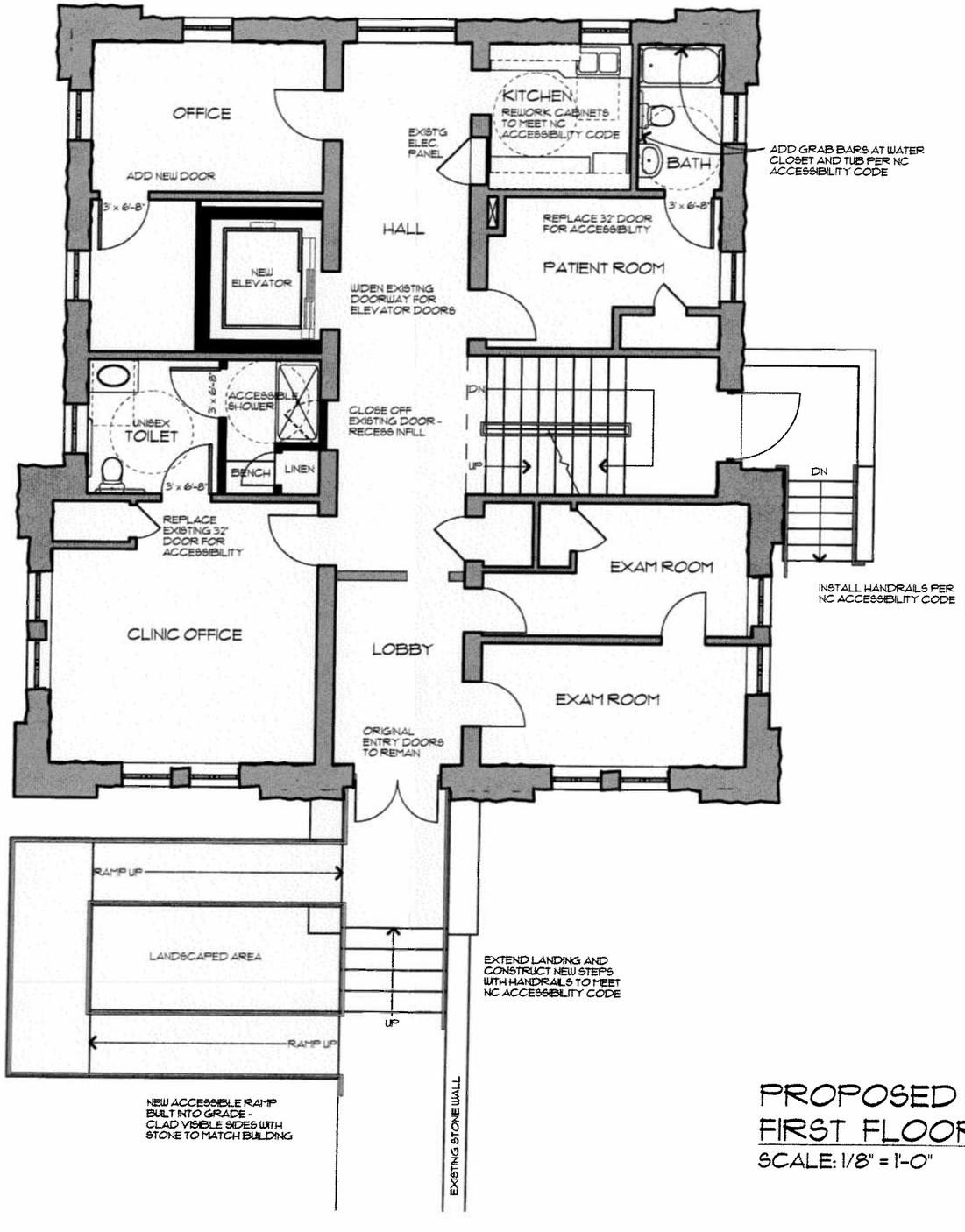
PROPOSED BASEMENT PLAN




# PROPOSED FIRST FLOOR PLAN

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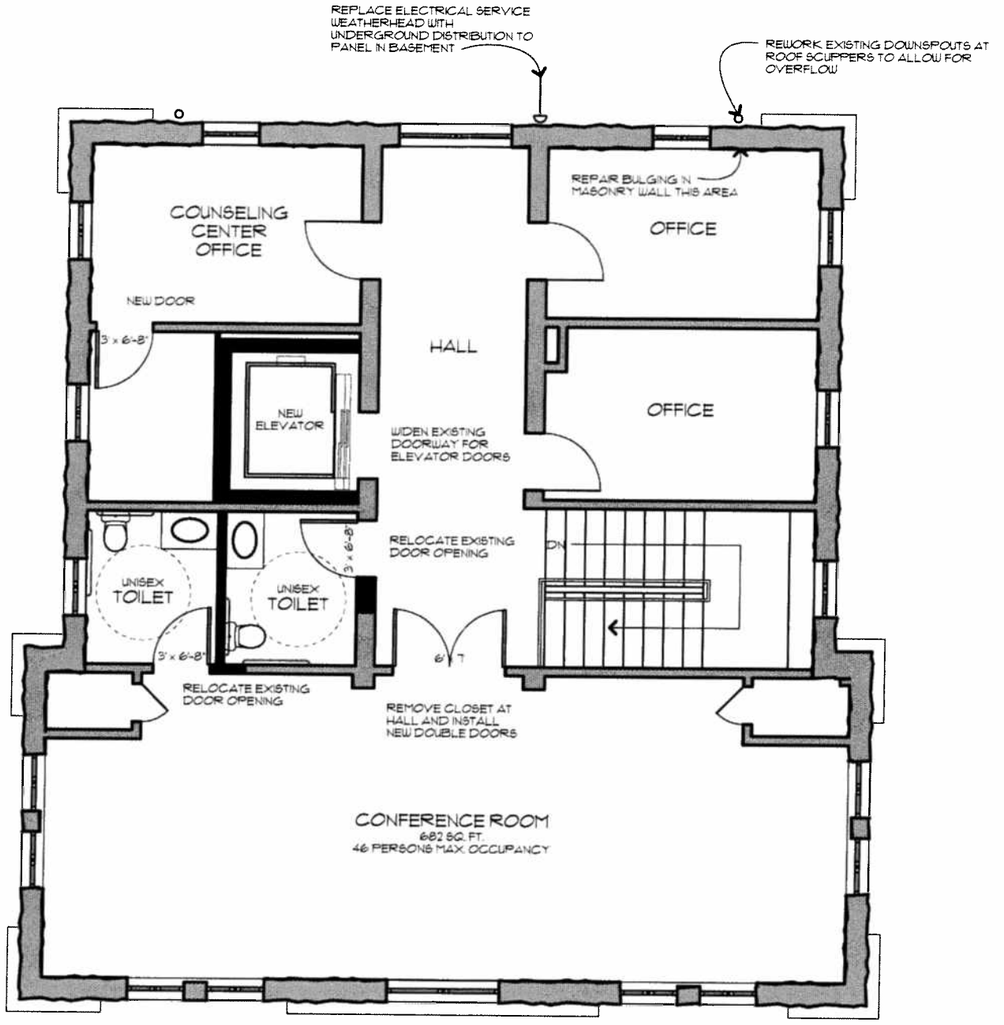
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED FIRST FLOOR PLAN




PROPOSED
SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"

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GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED SECOND FLOOR PLAN

# ROBINSON WELLNESS CENTER

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

*(Mars Hill College DN-007)*


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# ROBINSON WELLNESS CENTER

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

## GENERAL INFORMATION

| | |
|---|---|
| **Year Built** | 1935 as Dr. W. F. Robinson Memorial Infirmary |
| **Style** | Rustic |
| **Architect** | Henry Irven Gaines, Asheville, NC |
| **Builder** | Unknown |
| **Original Use** | Infirmary |
| **Current Use** | Infirmary |
| **Proposed Use** | Wellness Center with conference room on the second floor |
| **Building Area** | Main Floor: 1,957 SF<br>Second Floor: 1,957 SF<br>Basement: 1,163 SF<br>Total: 5,077 SF |

## HISTORIC SIGNIFICANCE

Erected in 1935 as the college infirmary, this is the only building within the historic quadrangle district that retains its original function. The building was dedicated to the memory of Dr. W. F. Robinson, college physician and for thirty-six years a member of the board of trustees.

## HISTORIC CERTIFICATION

Contributing building, proposed Mars Hill College Historic District, National Register of Historic Places.

## ARCHITECTURAL SIGNIFICANCE

This simple, rectilinear structure clearly was built in the style of nearby Montague Library. Although more conventional in design than Montague, it is nevertheless a well-proportioned and expressive building. The building's combination of rough, dry-laid stonework, dressed stone detailing and steel windows lend an informal, rustic air to an otherwise severe façade *(Figure 1)*.

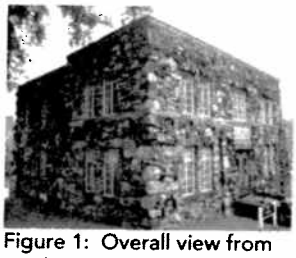


Figure 1: Overall view from northeast.

**Exterior**

- Building massing and proportions
- Irregular stonework with recessed mortar joints giving a dry-laid appearance
- Steel casement windows
- Granite plaque

**Interior**

- Original floor plan
- Proportions of interior spaces
- Plaster finish on walls and ceilings
- Original wood trim
- Pipe railing at stairway

**HISTORIC IMAGES**

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, than estimated dates have been assumed based upon other known dates, such as building construction dates, or clues from the images such as dress or cars. These have been placed in chronological order. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available.

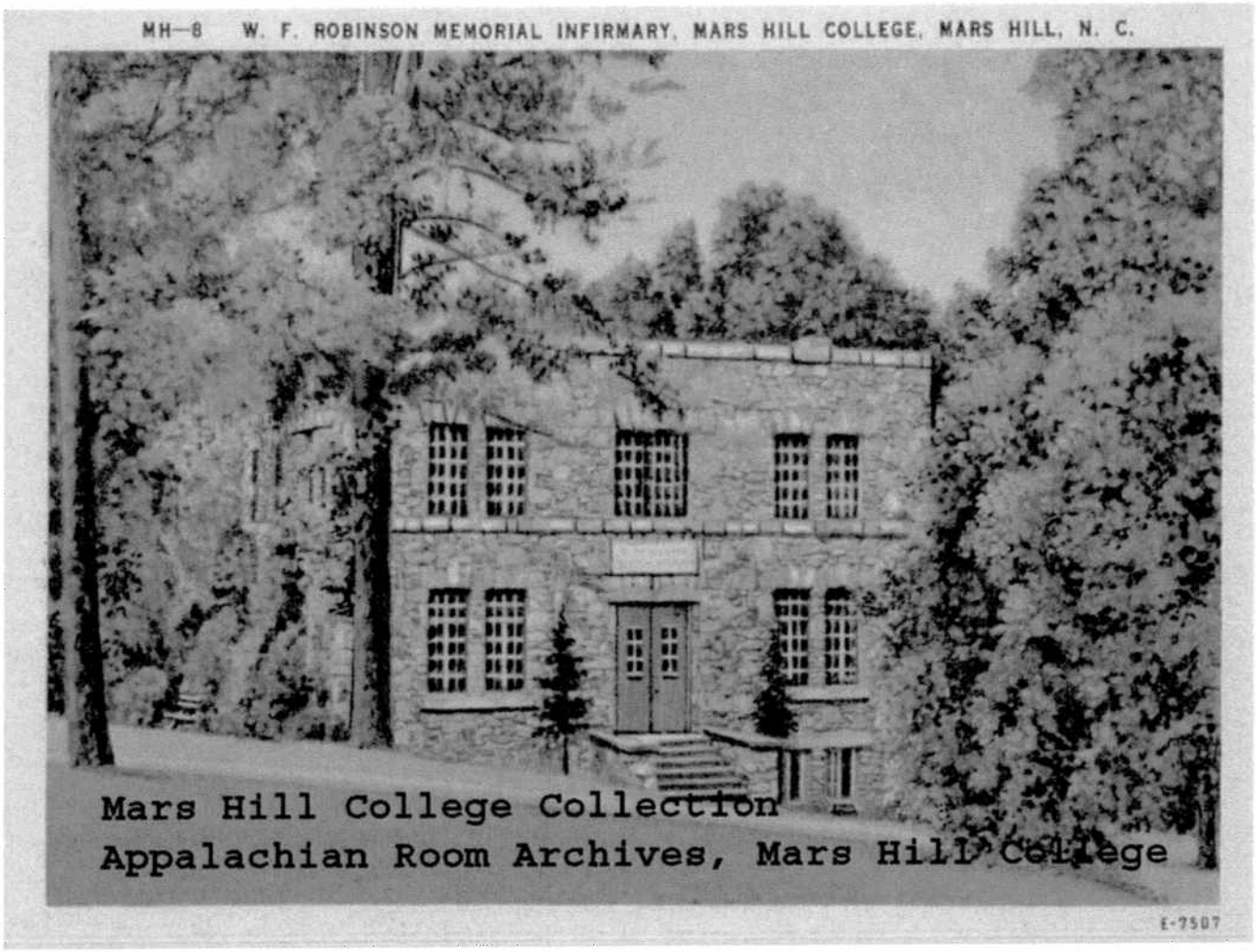

MH—8 W. F. ROBINSON MEMORIAL INFIRMARY, MARS HILL COLLEGE, MARS HILL, N. C.
Mars Hill College Collection
Appalachian Room Archives, Mars Hill College
E-7507

Image 1. Hand-colored postcard. Date unknown. Note color of windows, with red frames and white sash. *(MHC)*

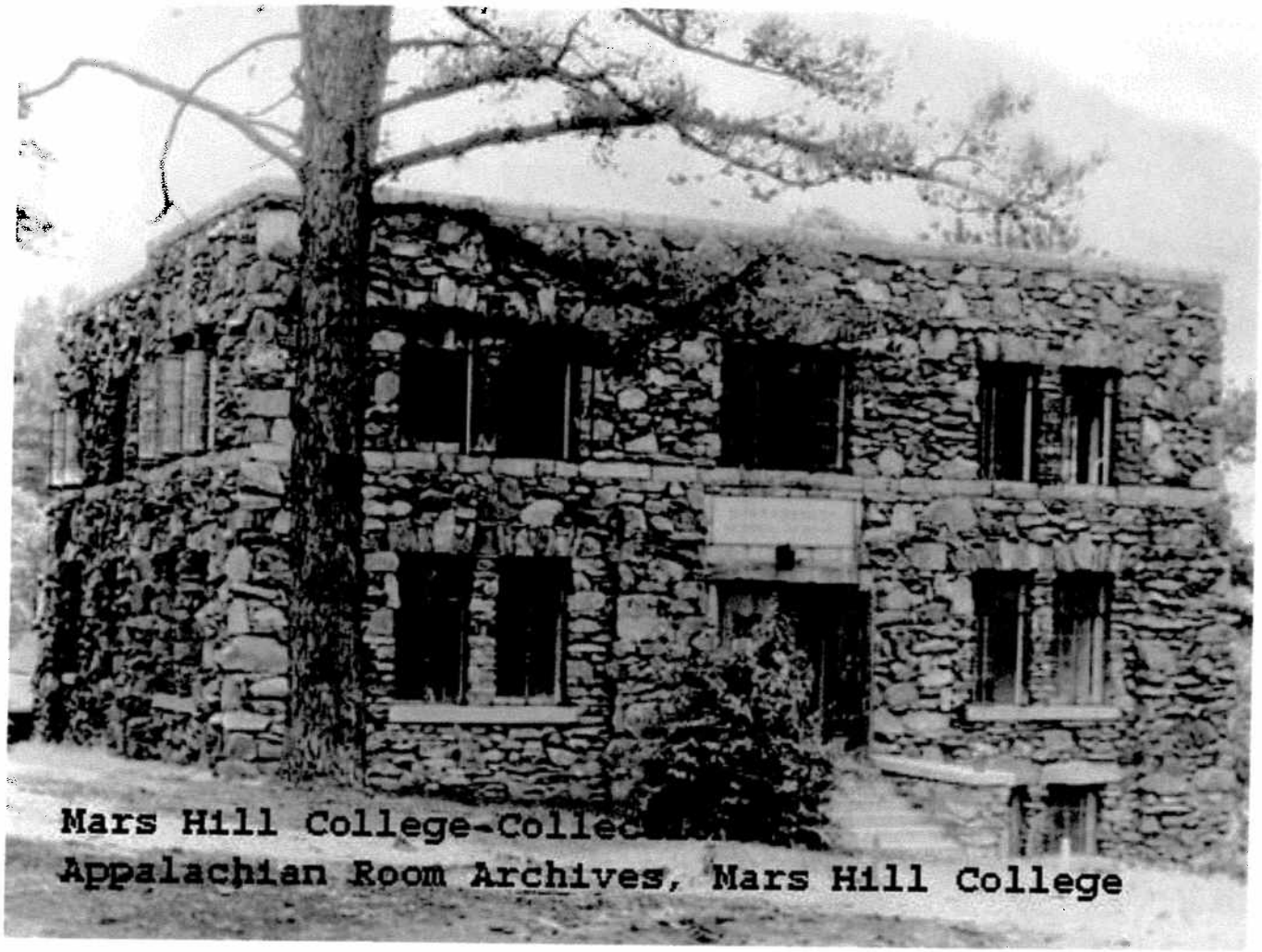



Image 2. Photo, date unknown, assumed to date after postcard image shown above due to size of the bush at the steps. Also indicates dark window frames and white sash. *(MHC 870)*

Image 3. Interior, typical patient room. *(MHC DN-007)*

## ARCHITECTURAL DESCRIPTION

### Exterior

Like the nearby Montague Hall, the Building's walls are constructed of local stone, set in a random pattern with recessed mortar joints to give the impression of dry laid work. The exterior walls are offset at the sides to break up the boxy mass of the buildings, giving the effect of a primary block with a rear central wing. The corners of the building at the main floor are subtly battered in a similar way as Montague. A cut stone belt course goes around the entire building at the second floor window sill line. A similar cut stone parapet coping terminates the stone walls. Above the entrance, a carved granite plaque the width of the doorway reads: "DR. W. R. ROBINSON / MEMORIAL INFIRMARY." A documentary photo *(Figure 2)* shows a sconce-type light fixture over the entrance door lintel and below the stone plaque. This vaguely Gothic-style light fixture has been replaced with a generic flood light.

Figure 2: Documentary photograph. Note original light fixture over doors.

The original windows are steel frame and sash, set directly into the stonework. All of the windows are casement type, many with transoms, and are symmetrically arranged around the central entrance. From a documentary photo *(Image 2)*, the windows appear to have originally been painted a dark color to blend with the varnished wood exterior doors.

Figure 3: Front entrance doors.

The wood entrance doors appear to be original (*Figure 3*). Similar to Montague, the door are of varnished oak, laminated construction, with v- jointed vertical tongue-and groove boards on a solid core. Here, standard hinges are used instead of the strap hinges used on Montague. The proportions of the glazed lights in the doors echo those of the windows. The side door leading form the stair landing is of similar design and construction, except with a single light. The basement entry has a paneled wood door of the period; however, it could be a replacement since it is not consistent with the other doors.

The flat roof is not visible, but slopes from north to south with scuppers draining to downspouts on the south walls.

### Interior

The interior is detailed fairly plainly throughout, with no outstanding architectural features (*Figure 4, Photo 10, 11, 13, 14*). The original floor plan appears to be mostly intact with only minor alterations. Interior finish consists of plaster on hollow clay tile. The character of the interior is made up primarily of the proportions of the central hall and rooms, and the deep recessed windows. Doorways have 6 inch wide casing with molded backband trim.

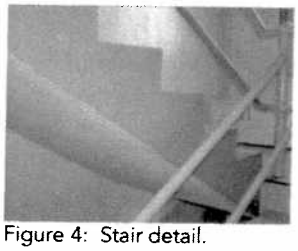


Figure 4: Stair detail.

## ARCHITECTURAL CONDITION ASSESSMENT

Figure 5: Detail of stonework at northeast corner. Note membrane roof termination bar at parapet.

Figure 6: Typical steel lintel at steel window. Note cracked putty and rust bleed through.

Figure 7: Typical steel window configuration.

### Exterior Stone Masonry

The stonework is the building's most important visual characteristic *(Figure 5)*. The stone itself appears to be in good condition; however the mortar joints in many areas have deteriorated, allowing water to enter the building. The dry-laid appearance of the stonework required great skill and care by the original mason to properly slope each stone away from the wall and allow for drainage. Any stone that was laid with a slope toward the wall would eventually create a waterproofing issue as cracks developed in the mortar.

The cut stone parapet coping originally created a potential waterproofing issue, and relied heavily on the integrity of the individual mortar joints. A single-ply roof membrane now protects the coping.

There is evidence of significant bulging on the interior of the south wall, southwest room, 2nd floor *(Photo 13)*. This damage is probably due to overflow from the downspout adjacent to this area. The damage does not appear to be structural in nature, and was not mentioned in the structural engineer's report.

### Roof

The original roof was probably a traditional built-up tar and gravel system. The current roof is a mechanically-fastened "Duro-Last" PVC single-ply membrane that was installed in 2001. The roof installation included wrapping the membrane up the sides and over the top of the parapet *(Figure 5)*. It is assumed that the new roof membrane has eliminated water infiltration in through the roof deck. However, there are other problematic waterproofing issues that need to be addressed.

The two drainage scuppers from the roof through the parapet walls are fitted directly to 4" PVC pipe which turn down the rear of the building. This is a similar situation to Montague Library. This detail does not allow for overflow drainage from the roof and could lead to clogged downspouts and backup onto the roof deck. Originally, there were four additional cast iron overflow drains through the parapet walls *(Photo 6)*. These drains have been abandoned and subsequently covered over with the roof membrane.

### Windows

The steel casement windows are one of the most important architectural features of the building. Every effort should be made to preserve and restore the original windows. The windows and steel lintels typically exhibit surface rusting and failed glazing putty in many areas *(Figure 6)*. The level of deterioration appears to be largely cosmetic however, and restoration of the windows should be fairly straightforward.

The operability of the windows appears to be good, and they are opened on a regular basis. Most of the original screens are still intact and in good condition. Ill-fitting sash due to warping or paint build up is allowing uncontrolled air infiltration. Steel windows unfortunately have a high thermal conductivity, which allows for significant transfer of heat from the interior in the winter.

Figure 8: Second floor hall.

**Interior Floor Plan**
The original floor plan survives with only minor alterations. For the proposed continued use of the building as a wellness center, the existing floor plan will work well with only minor alterations for accessibility. Refer to Proposed Floor Plans.

**Flooring**
The original flooring material is not known, but is assumed to be sheet linoleum. The current flooring is a vinyl asbestos tile. The flooring is in fair to good condition throughout.

**Walls and Ceilings**
All original walls are plaster on hollow clay tile. All ceilings are plaster on the concrete slab. The plaster had suffered moderate damage throughout due to water infiltration from the roof as well as from exterior walls. Substantial areas showed efflorescence, delamination and mildew. Damage was especially evident around the windows. Since the roof was replaced in 2001, much of the interior plaster has been repaired and repainted. The overall condition of the interior is good.

**Doors and Woodwork**
The original front entrance doors are still in service and in fair condition although showing extreme weathering. The side entrance door is similarly weathered. The double front entrance doors have 2'-6" wide leaves, and technically do not meet accessibility requirements.

**Hazardous Materials**
The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and boiler. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical ceiling tiles, plaster and gypsum wall board joint compound. Mold can be present wherever water damage to absorbent materials has occurred.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant.

## CURRENT PHOTOGRAPHS

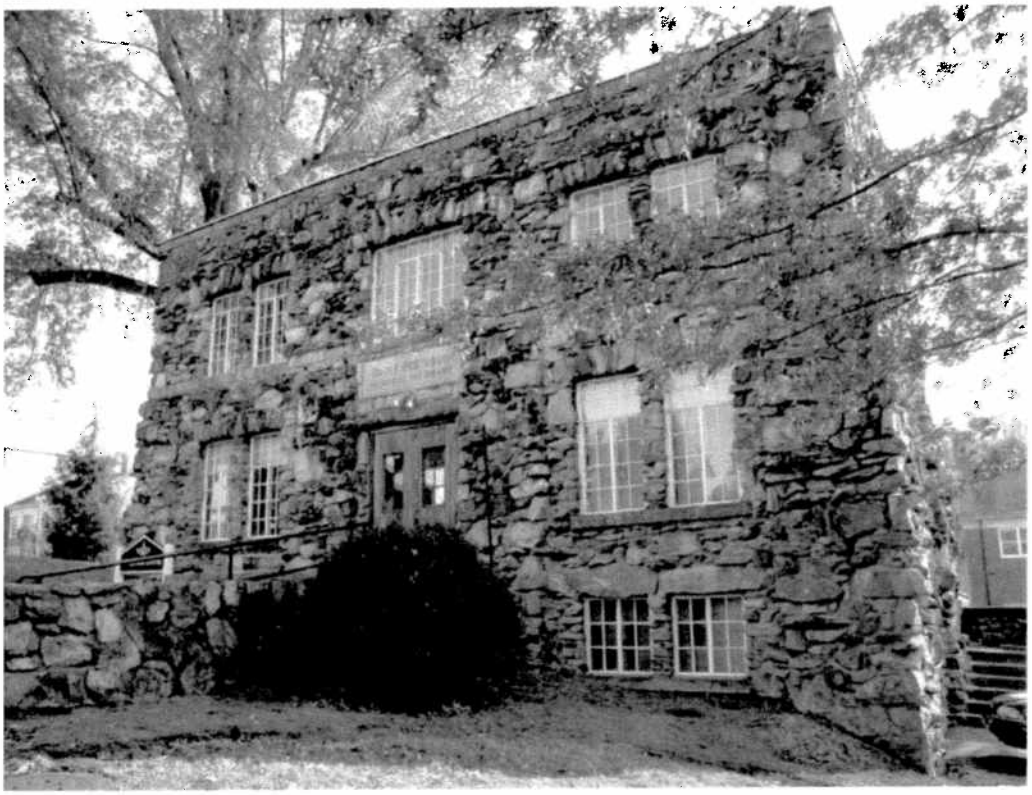


Photo 1. Front view from northwest. Retaining wall was added at later date.

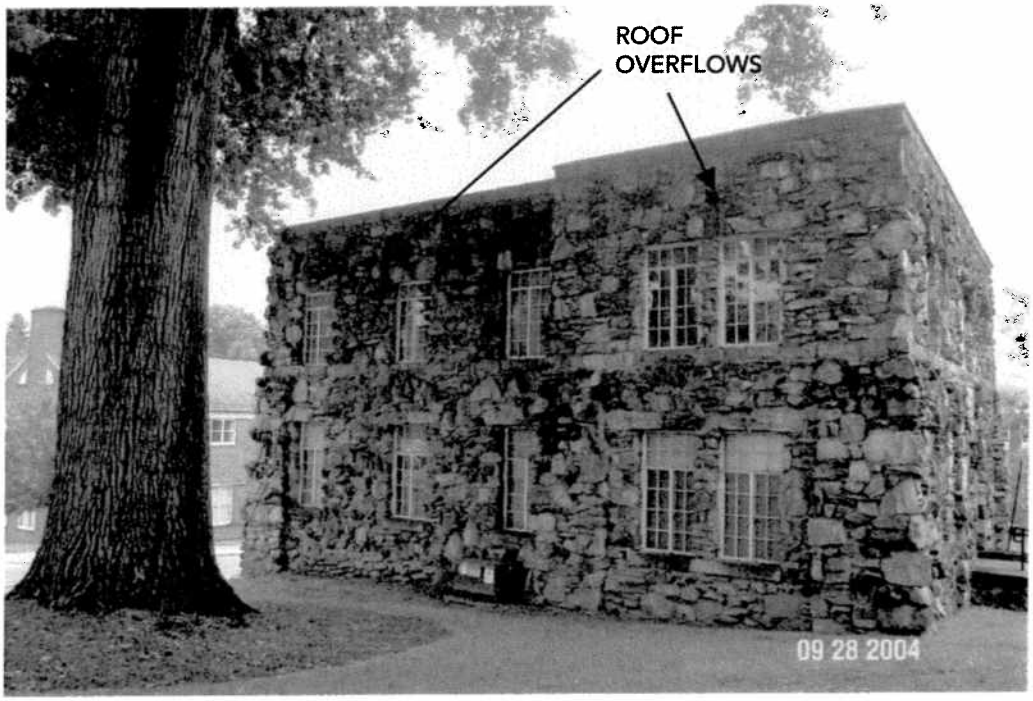



Photo 2. East view. Note holes above windows for original roof overflow drains (see also Photo 5). These overflows have been covered over with the membrane roof.

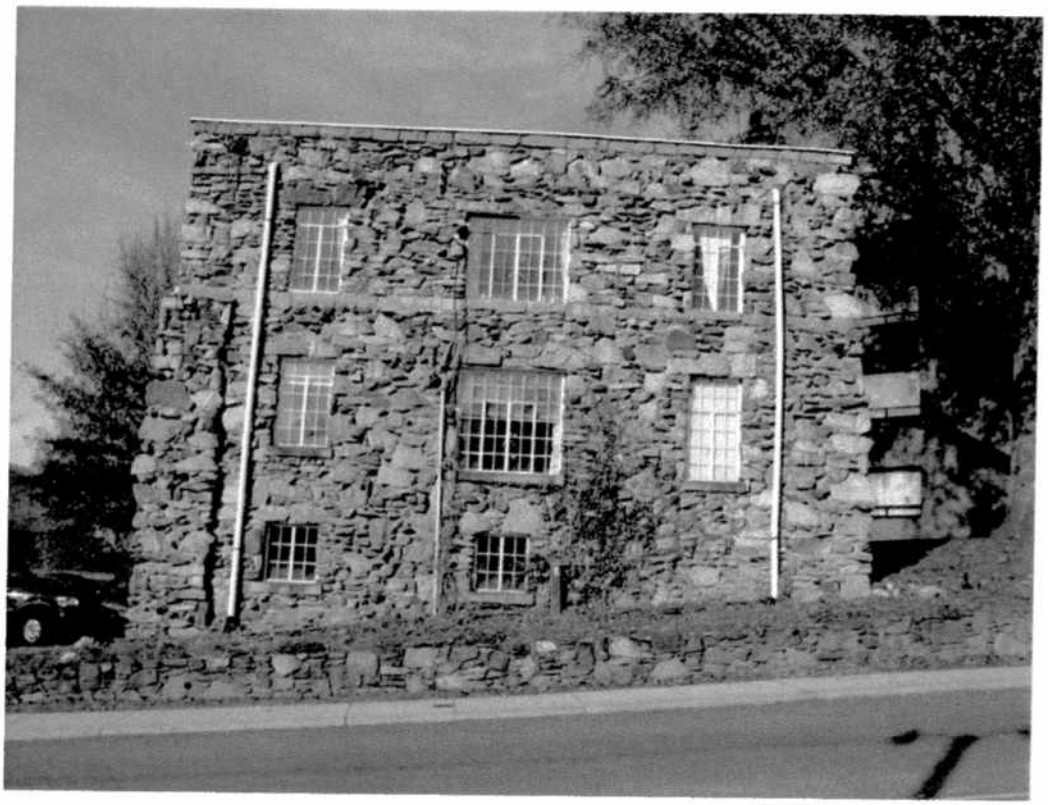


Photo 3. South facade from Cascade Street. Note downspouts piped directly from roof drain without overflow scupper.

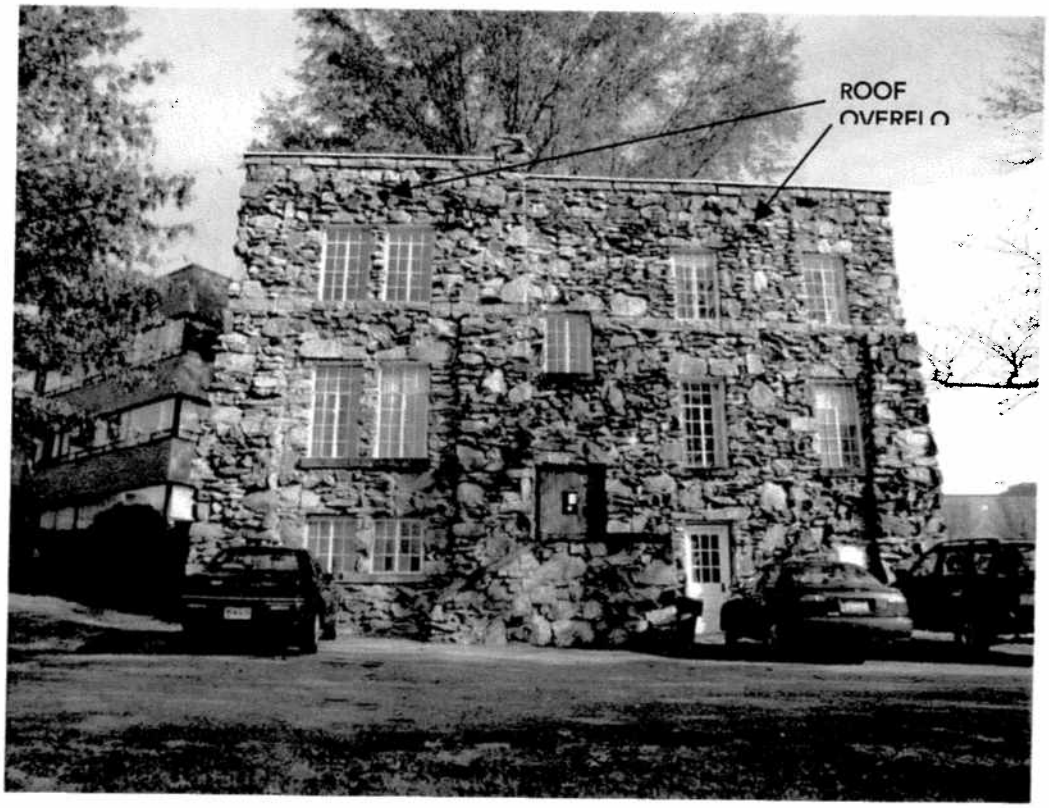



Photo 4. West facade. Note holes above windows for original roof overflow drains (see also Photo 5). These overflows have been covered over with the membrane roof.

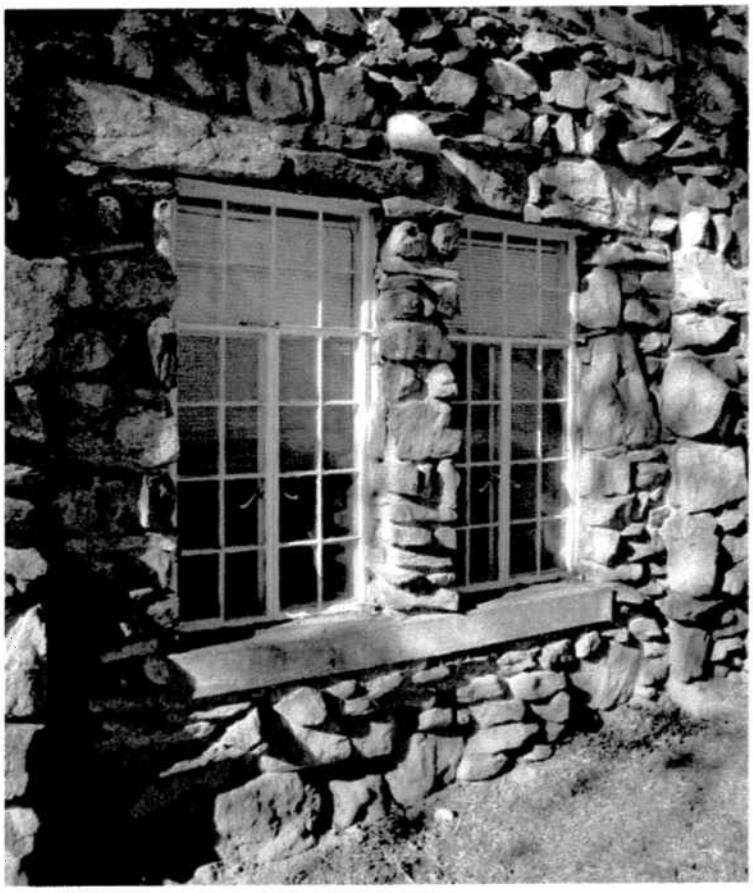


Photo 5. Typical steel windows with transoms and interior screen frames.

Photo 6. Abandoned cast iron roof overflow in parapet wall. There are a total of four of these original overflow pipes that have been covered with the current membrane roof.

Photo 7. Typical roof condition. Membrane on roof deck appears to be installed to manufacturer's standards. Membrane installation on parapet wall could have been executed better in several areas.

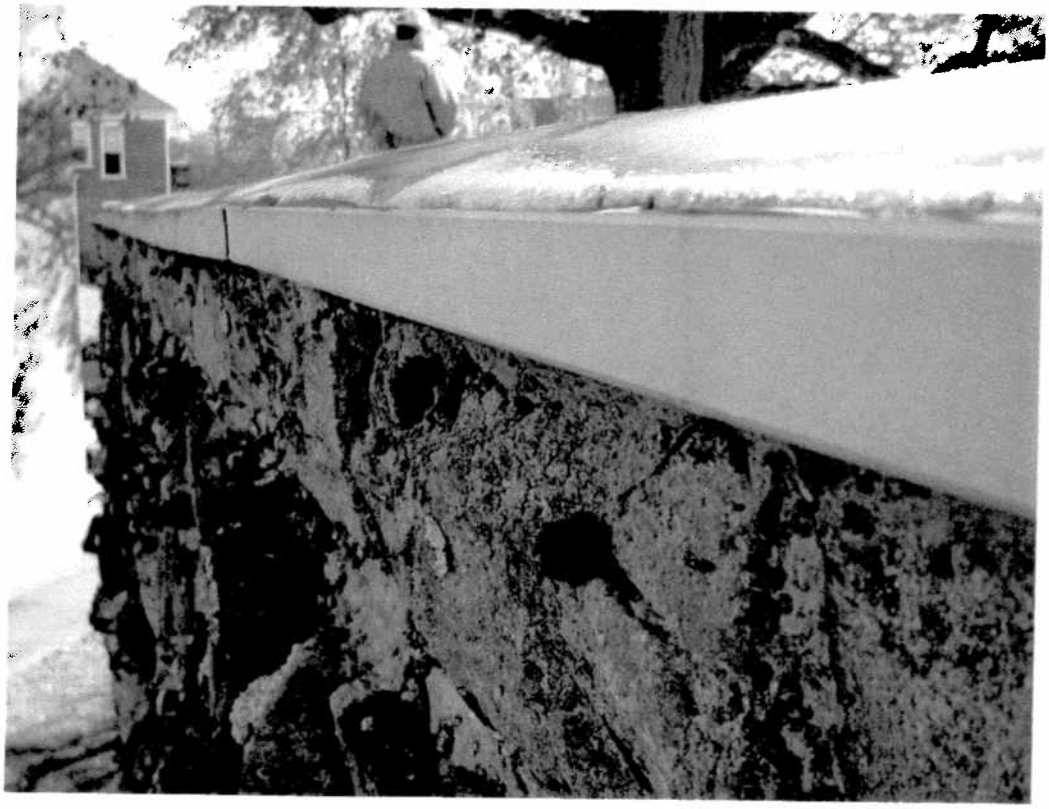


Photo 8. Manufacturer's standard termination bar used at edge of parapet coping. The coping at Montague is apparently too irregular to use this detail.

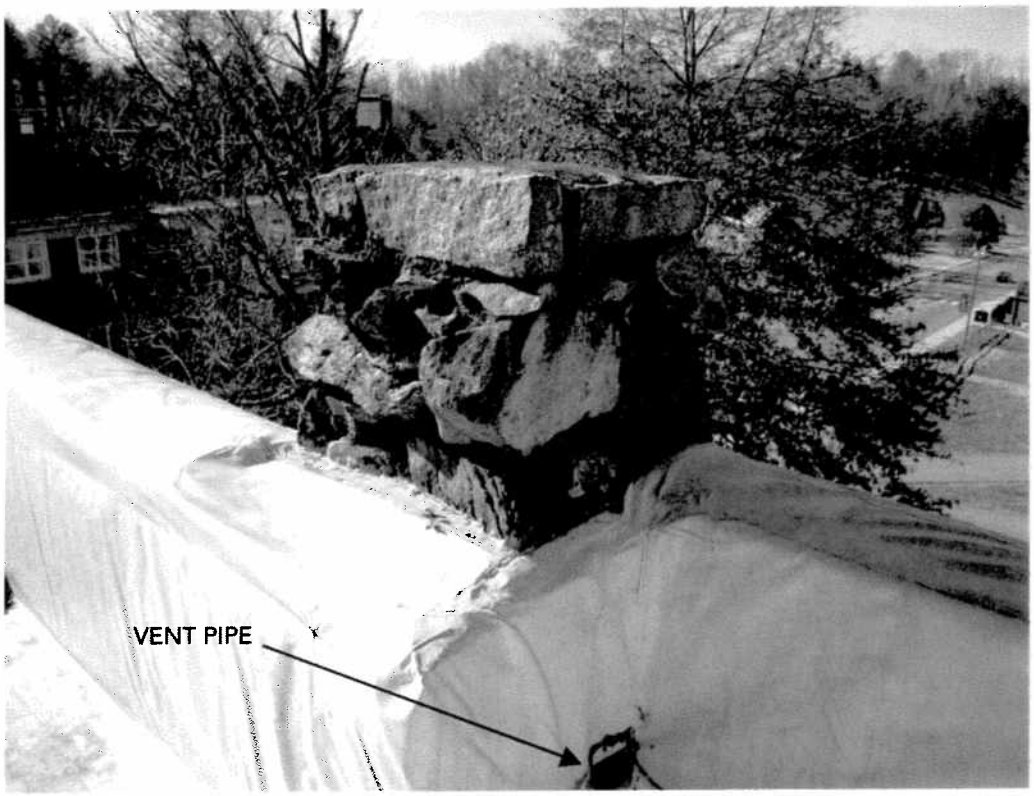



Photo 9. Roof membrane detail at west side chimney relies on sealant at edge instead of proper flashing. Chimney in middle of roof has a termination bar to secure membrane. Opening at bottom of inside corner appears to be a vent pipe from the basement toilet, and is very poorly detailed.

Photo 10. First floor hall, looking south. Stairway is at center, to right.

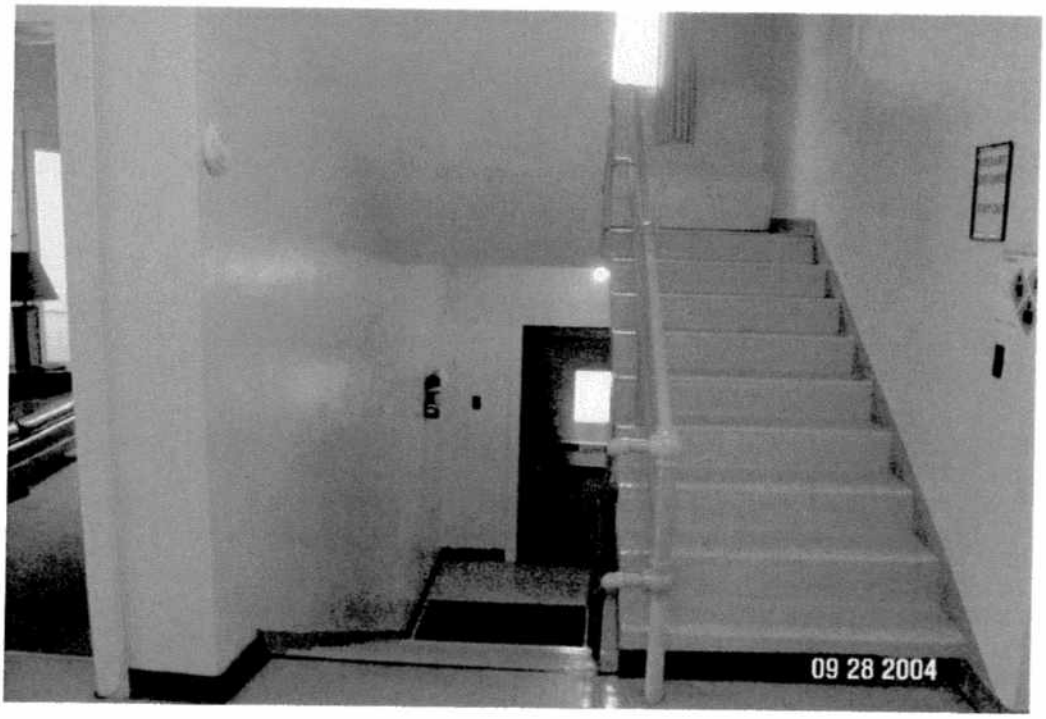



Photo 11. Stairwell from First Floor. Side entrance is at landing below. Non-complying open railing at stair is not required to be replaced (*NC Rehabilitation Code § 1.33.b.10*).

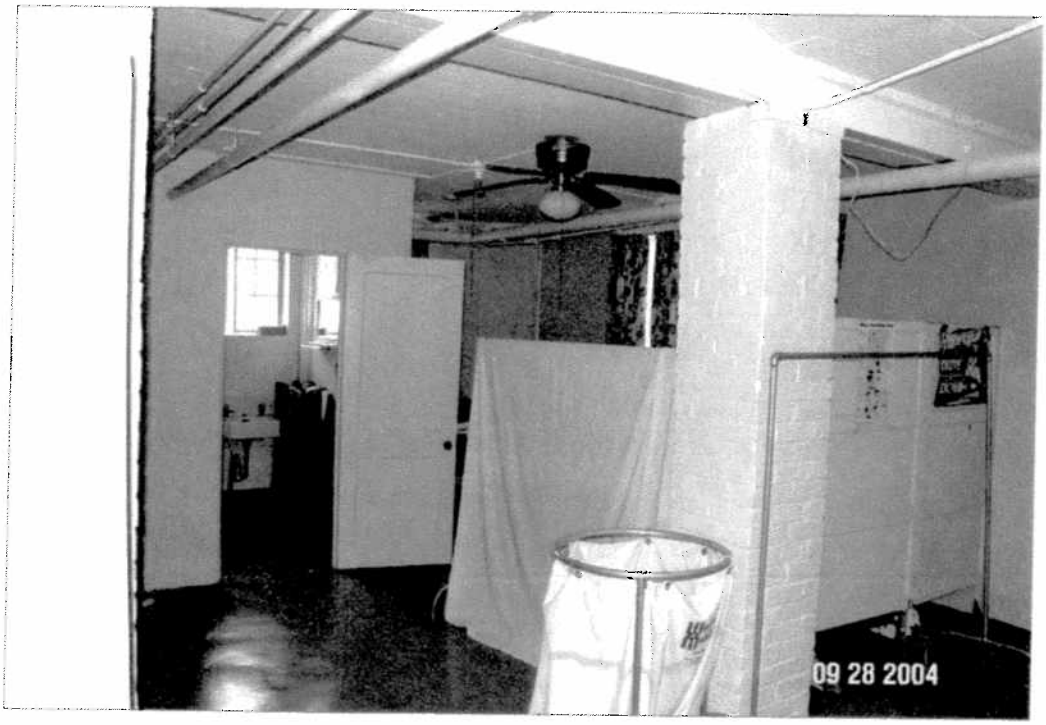



Photo 12. Basement room used for athletic physicals and off-season storage.

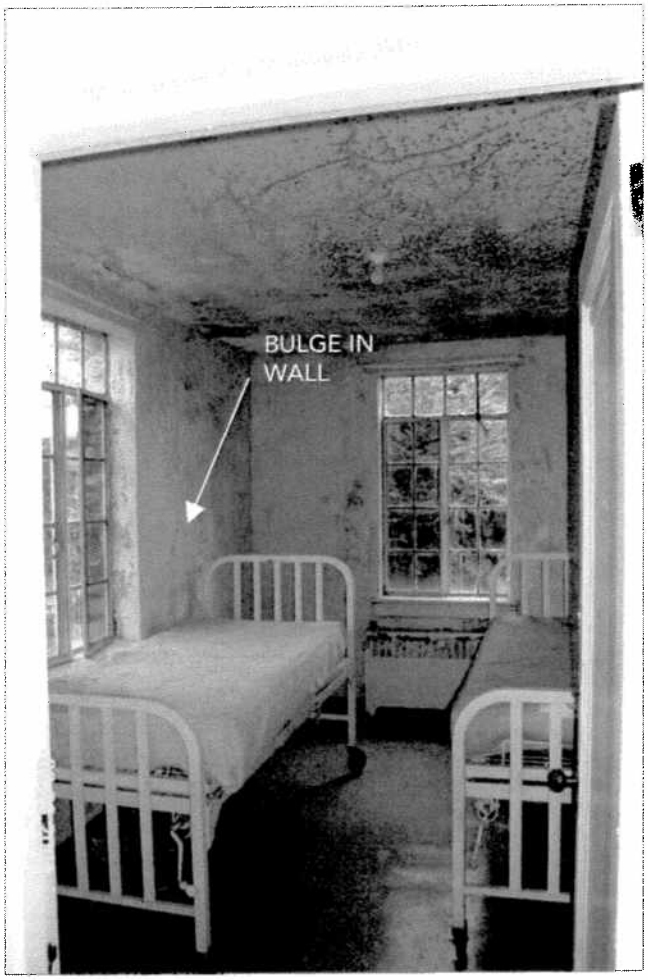



Photo 13. Typical patient room before renovation. Note mold, mildew, deteriorating and bulging plaster.

Photo 14. Old patient dormitory on 2nd Floor. Proposed use will be for conference room.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. The following summary is based on the consultant's report, unless noted.

### Foundation & Basement

The current structure is three stories with a partial basement. The exterior of the structure is clad with large stones. The foundation would likely be composed of a cast-in-place concrete footing below the load bearing walls and columns. The basement level consists of a concrete slab-on-grade. The exterior walls are exposed in the crawl space revealing stacked stone foundation walls. Brick columns support beams in portions of the lower level. A portion of the basement is a crawlspace.

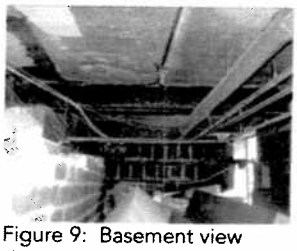


Figure 9: Basement view showing structural tile foundation walls, concrete slab floor above

### First and Second Floors

The building is composed of a cast-in-place concrete roof slab, floor slabs, beams, columns, and stairs. The interior wall structure appears to be composed of terra cotta block with cast-in-place concrete columns.

### Roof Framing

The roof structure is a cast-in-place concrete slab supported by cast-in-place concrete beams.

## BUILDING SYSTEMS ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC.

### Plumbing System

Existing plumbing systems consist of water, waste, and vent systems, all of which are in need of upgrade. Water service enters the building in the basement. It is not clear where building sewer exits the building. Hot water is provided by an electric water heater. The building is not sprinkled. Plumbing fixtures are not water-saving type, and generally do not meet accessibility codes. The number of plumbing fixtures is addressed in the Code Assessment section of this report.

Figure 10: Plumbing and heating pipes in crawl space. Note deteriorating asbestos insulation.

### HVAC Systems

Heating is provided by a 30 year old cast-iron oil-fired steam boiler, located in a boiler room in the basement. Insulation is missing from much of the steam and condensate piping in the boiler room and crawlspace area. Steam radiators are used throughout the building. Cooling is provided in some areas using window air conditioners.

Figure 11: Electrical service weatherhead is very close to operable steel casement windows on both floors.

### Electrical System

Electrical service is provided underground to conduit that runs up the exterior of the building on the south elevation. Weatherheads on the 2nd and 3rd floors then feed into small load centers that provide power to the building *(Figure 11)*. There are stand-alone smoke detectors installed.

**BUILDING CODE ASSESSMENT**

The building was evaluated primarily under the NC Rehabilitation Code (Rehab Code). These code provisions would apply should any work be undertaken. Refer to Introduction for definitions.

**Construction Type**

Type 1-B: Exterior walls of non-combustible masonry; interior floor and roof structures of non-combustible concrete construction.

**Current Use**

Use Group B - Business: Clinic – Outpatient .

**Proposed Uses**

Use Group B - Business: Clinic – Outpatient.

| Area – Gross Square Feet | Occupancy Load | Total Occupants |
|---|---|---|
| Main Floor: 1,707 sq. ft. | 100 sq. ft. /person | 18 |
| 2nd Floor: 1,068 sq. ft. | 100 sq. ft. /person | 11 |
| 682 sq. ft. Conference Room incl. | 15 sq. ft. /person | 46 |
| Basement: 833 sq. ft. finished | 100 sq. ft. /person | 9 |
| 248 sq. ft. storage/mechanical | 300 sq. ft. /person | 1 |
| Total Occupant Load | | 85 |

**Scope of Work**

In addition to the required repair work as outlined in the Preservation Recommendations section, the program requirements established by Mars Hill College include:

- Upgrading of existing toilet facilities to meet Americans with Disabilities Act Accessibility Guidelines (ADAAG).
- Installation of an elevator to create access to all floors.
- Development of a Conference Room on the 2nd Floor.

This proposed scope of work for the building would be defined as an "Alteration" for purposes of evaluation by the NC Rehabilitation Code. In such "alteration" work, the configuration of the building is changed in some manner. However, the proposed changes do not appear to be extensive to the point that the building could not be occupied during work, therefore requiring a new Certificate of Occupancy.

There are also Basic Requirements for the Business Use Group, contained in Sec. 1.17. An "alteration" must not create a non-conformity with any of these basic requirements which did not exist before the alteration was undertaken.

In accordance with the proposed scope of work, certain improvements to the accessibility of this building will be required when the alteration work is undertaken. It must be pointed out that installation of an elevator in this building is not required either by the NC Rehab Code, NC Accessibility Code, or the ADA.

**Compliance Assessment**

**Accessibility Compliance**

1. ADA Accessibility Guidelines (ADAAG) are applicable by Title III of the Americans with Disabilities Act (ADA).
   - Sec. 36.104 – Definitions. The college is considered a "place of public accommodation" defined as a "...undergraduate, or postgraduate private school, or other place of education."
   - Sec. 36.304 – Removal of barriers. A public accommodation shall remove architectural barriers in existing facilities, including communication barriers that are structural in nature, where such removal is readily achievable, i.e., easily accomplishable and able to be carried out without much difficulty or expense. Removal of barriers is required by the ADA, and is the responsibility

of property owners in order to be in compliance with Federal civil rights law. Initiating barrier removal is not within the jurisdiction of the NC Dept. of Insurance or local Code Enforcement Official. Refer to Title III of the Americans with Disabilities Act, Sec. 36.304 Removal of Barriers found at http://www.usdoj.gov/crt/ada/reg3a.html for details.

2. NC Rehabilitation Code, Sec. 1.6.e, Para. 1-5, minimum requirements for providing accessibility to the building would include:
   - Toilet Rooms (Para. 2). When space is reconfigured, compliance with NC Accessibility Code Chap. 39 is required.
   - Doors and Doorways (Para. 3). Reconfigured and new doorways shall comply with NC Accessibility Code Sec. 7.9.1.
   - Entrance Steps and Ramp (Para. 4). When entrance steps are being replaced, and accessible entrance shall be provided if this does not add more than 20% to cost of replacement.
   - Accessible Path of Travel (Sec. 1.6.j). Provided in altered space up to the point at which cost of providing accessibility exceeds 20% of cost of alteration. Accessible features shall include in order of priority: parking space, exterior route, building entrance, interior route, restrooms, drinking fountains, and telephones.

**Historic Preservation Provisions**

Listing on National Register allows for special provisions under NC Rehab Code Sec. 1.33 – Historic Buildings. The intent of the proposed plans is that the work will be consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties. All accessibility compliance requirements as summarized below are incorporated into the schematic Proposed Floor Plans.

- Original or replica materials and original methods of construction may be used.
- Exterior walls not required to meet requirements for fire resistive construction.
- One-hour fire resistive construction not required where existing finish is lath and plaster.
- Existing door openings and corridor and stairway widths less than required may be approved as allowed by building inspector.
- Existing front or main exit doors not required to swing in direction of travel when serving less than 50 people or when other approved exits are provided.
- Existing or replica hardware shall be permitted provided no life safety hazard and meets intent of Accessibility Code.
- Transoms in corridors and other fire rated walls may remain.
- Existing historic finishes may be retained.
- Stairway enclosures may be omitted for portion of stair serving first and second floor.
- Original riser height and tread width may remain for stairs being repaired or replaced.
- Existing handrails may remain or replaced to match.
- Existing 30" guardrails may remain if drop off less than 48".
- Existing ceiling heights may remain.

## PRESERVATION RECOMMENDATIONS

### Critical Maintenance Issues

1. Drainage. Building drainage design should be re-evaluated.
   - Scuppers should be overflow type with open leader heads. Size and placement of scuppers will need to be designed.
   - Drainage should be piped away from building.
   - Excavate and waterproof foundation around below grade basement area to prevent moisture migration into basement.

2. Stone Masonry. Restore stonework per National Park Service Technical Preservation Briefs 1 and 2 regarding historic masonry. (*Brief 1: Assessing Cleaning and Water-Repellent Treatments for Historic Masonry Buildings and Brief 2: Repointing Mortar Joints Energy*, www.cr.nps.gov/hps/tps/briefs.)
   - Repoint deteriorated mortar joints and incompatible Portland cement mortar repairs with appropriate cement/lime mortar to match existing original joint color and profile.
   - Exposed watertables and other ledges should have a sloped cementitious wash with a waterproof coating to match original mortar color.
   - All ivy roots and other organic matter should be removed from mortar joints.

3. Roof Membrane. Existing roof membrane should be closely evaluated with regards to quality of installation.
   - Deck membrane appears to be installed according to manufacturer's specifications. Membrane covering parapet should be removed and reinstalled in several places where manufacturer's detail has not been followed. The detail at the chimney (Photo 9) is especially problematic and should be addressed.
   - Roof deck membrane should ideally be installed over sloped deck insulation to ensure proper drainage to drain scuppers and prevent ponding.
   - The original overflow drains on both the east and west sides should be re-opened and properly flashed. The drains should have projecting scuppers installed to prevent water from running down the face of the stone.

4. Windows. Restore steel windows per National Park Service Technical Preservation Brief 13: The Repair and Thermal Upgrading of Historic Steel Windows. NPS Preservation Brief 13: *The Repair and Thermal Upgrading of Historic Steel Windows*, www.cr.nps.gov/hps/tps/briefs/brief13.htm.
   - Replace missing sections of steel windows or fabricate new sections to match.
   - Treat rusted steel lintels and paint.
   - Prepare, re-glaze and paint steel windows to prevent further deterioration.

5. Doors. Repair exterior doors to prevent further deterioration.
   - The NC Accessibility Code will allow non-compliant historic entrance doors to be preserved provided that the requirements of Section 51.4.3.2.1 are met. [Refer to Section 4 – Code Review].
   - Repair, prep, and re-varnish original paneled exterior doors to prevent further deterioration.
   - Clean, prep and paint exterior iron hardware, hinges.
   - Preserve all original hardware as permitted by Building Code or Rehabilitation Code.
   - Install weatherstripping and accessible thresholds.

### Priority Rehabilitation Issues

1. Accessibility. Refer to Floor Plans – Proposed.

- Construct new accessible ramp and reconfigure existing steps and landing at front (south) entrance.
- Install new bronze hardware at front doors to meet requirements of NC Accessibility Code Section 7.9.
- Construct new landing and accessible ramp at Basement level entrance.
- Install new elevator per schematic floor plans.
- Rework restrooms on both floors to meet NC Accessibility Code. [Refer to Schematic Plans].

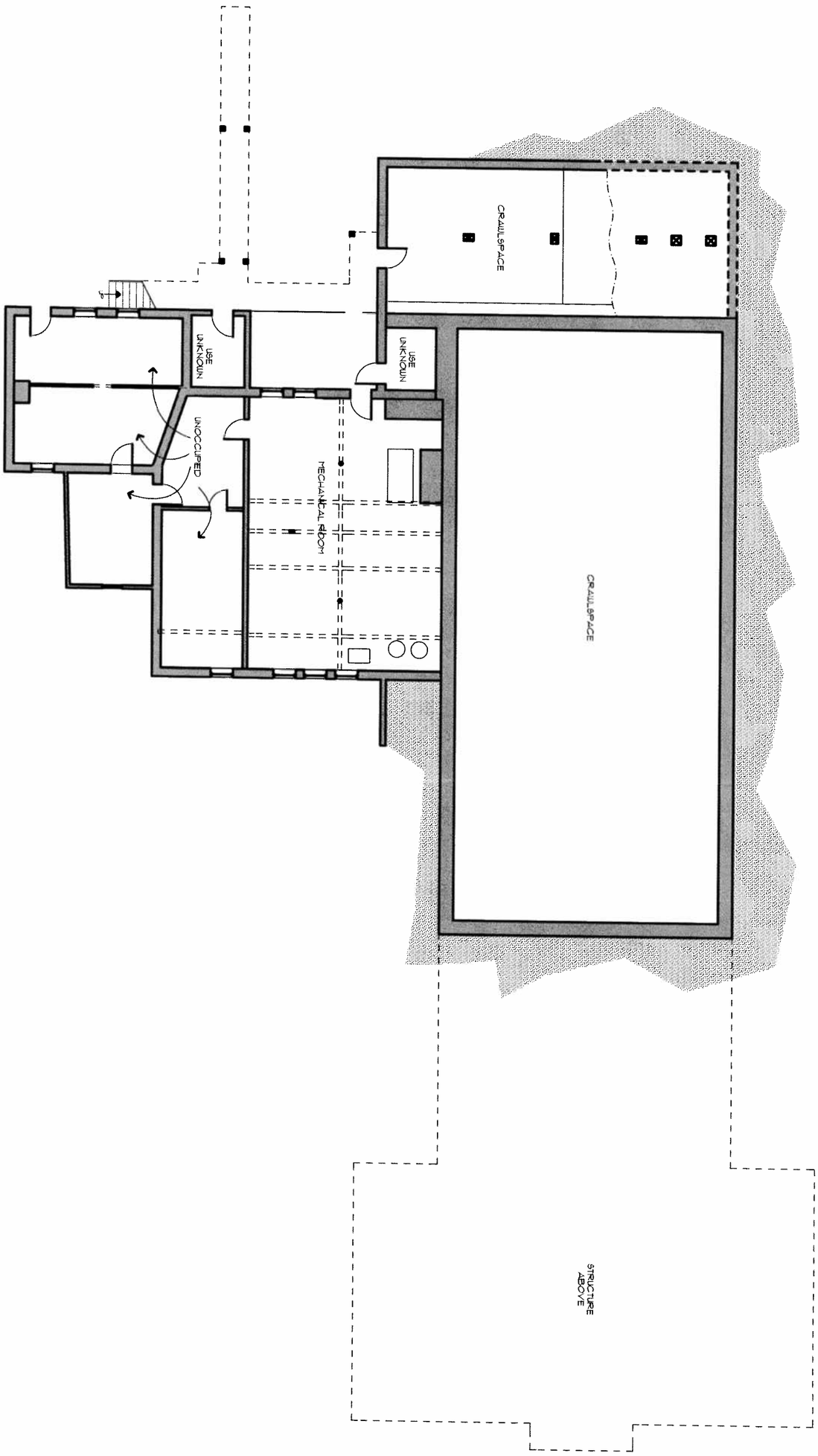
2. Interior Finishes
   - Undertake other alterations per Proposed Floor Plans (see Appendix).
   - Install interior storm windows throughout. Allied Windows (*www.stormwindows.com*)
3. Structural System
   - Failure of the roof system in the past allowed water to enter the building. The roof membrane has been replaced and is presumably no longer a concern except for some details (see Item I-3). According to the structural engineer, the structure exhibits no members that are currently failed or under stress. No remedial work is proposed.
4. HVAC System
   - Complete asbestos abatement on all piping and equipment.
   - Remove existing boiler.
   - Install new boiler; re-pipe hot water distribution; install new fan-coil units or air-handling units with DX split systems; upgrade controls.
5. Plumbing System
   - Repair or install new plumbing system throughout to meet code.
   - Replace all plumbing piping and fixtures; reuse existing electric water heater.
   - Optional: Provide a fire sprinkler system. (*The addition of a fire suppression system is technically not required under the provisions of the NC Rehabilitation Code. Refer to "Section 4 – NC Rehabilitation Code Assessment" for additional information.*)
6. Electrical System
   - Provide all new electrical service and distribution system, with sufficient capacity to provide for outlets to support building use.
   - Remove/relocate weatherhead adjacent to hallway windows.
   - Provide a complete fire alarm system.

## COST ESTIMATE

Based upon current market information, a statement of probable cost follows. Unit price figures are obtained from R.S. Means, 1st qtr. 2006. Square foot costs for plumbing, mechanical and electrical are provided by Reece, Noland & McElrath, Inc. These costs do not include asbestos abatement or interior furnishings.

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead & Profit |
|---|---|---|---|---|---|
| **01 General Conditions** | Construction facilities, temporary equipment, administration, regulatory requirements | | | 10% | $30,212.00 |
| **02 Existing Conditions** | Demolition of concrete slab for new elevator shaft | 25 | C.F. | 18.70 | $467.50 |
| | Cut out of 8" thick hollow tile masonry for new openings | 60 | S.F. | 9.95 | $597.00 |
| | Demolition of 8" thick hollow tile walls | 196 | S.F. | 0.55 | $107.80 |
| | Demolition of existing interior partitions | 244 | S.F. | 0.30 | $73.20 |
| | Excavating trench at foundation by hand | 6 | C.Y. | 21.50 | $129.00 |
| | Lead paint removal/prep multi-light steel windows | 615 | S.F. | 18.00 | $11,070.00 |
| | Lead paint removal/prep exterior wood doors | 112 | S.F. | 5.20 | $582.40 |
| **03 Concrete** | Concrete footing at masonry walls | 36 | L.F. | 21.50 | $774.00 |
| | Concrete ramp and landings | 300 | S.F. | 12.30 | $3,690.00 |
| **04 Masonry** | CMU exterior wall structure | 566 | S.F. | 14.80 | $8,376.80 |
| | Stone cheek walls at ramp | 42 | S.F. | 25.50 | $1,071.00 |
| | Pointing existing stone masonry | 480 | S.F. | 19.20 | $9,216.00 |
| | Cleaning existing stone masonry | 4,800 | S.F. | 0.71 | $3,408.00 |
| **05 Metals** | Railing at stairs, ramps | 17 | L.F. | 34.50 | $586.50 |
| | Metal stud partitions | 288 | S.F. | 4.55 | $1,310.40 |
| **07 Thermal & Moisture Protection** | Foundation drainage | 25 | L.F. | 7.45 | $186.25 |
| | Foundation waterproofing | 88 | S.F. | 0.85 | $74.80 |
| | Roof drainage - reconnect downspouts to drains | 4 | Ea. | 263.00 | $1,052.00 |
| **08 Openings** | Doors - new interior doors | 12 | Ea. | 363.20 | $4,358.40 |
| | Doors - new interior fire-rated doors | 3 | Ea. | 774.50 | $2,323.50 |
| | Doors - new custom exterior wood door | 1 | Ea. | 1,440.00 | $1,440.00 |
| | Doors - restore existing exterior doors | 4 | Ea. | 790.00 | $3,160.00 |
| | Doors - install bronze weatherstripping at exterior doors | 4 | Ea. | 63.00 | $252.00 |
| | Doors - new door hardware to meet ADA | 4 | Ea. | 138.80 | $555.20 |
| | Windows - storm windows, interior magnetic | 615 | S.F. | 6.40 | $3,936.00 |
| **09 Finishes** | Exterior painting - doors | 4 | Ea. | 52.25 | $209.00 |
| | Exterior painting - steel windows | 615 | S.F. | 3.70 | $2,275.50 |
| | Gypsum board | 576 | S.F. | 4.25 | $2,448.00 |

| CSI Section | Description | Quantity | Unit | Unit Cost | Total Incl. Overhead & Profit |
|---|---|---|---|---|---|
| | Interior painting | 776 | S.F. | 0.55 | $426.80 |
| | Plaster restore | 200 | S.F. | 2.05 | $410.00 |
| **10 Specialties** | Grab bars to meet ADA | 7 | Ea. | 85.50 | $598.50 |
| | Shower bench to meet ADA | 1 | Ea. | 610.00 | $610.00 |
| **12 Furnishings** | Cabinets - kitchen cabinets and counter to meet ADA | 9 | L.F. | 160.00 | $1,440.00 |
| **14 Conveying Equipment** | Elevator, hydraulic, 2500 lb passenger, 3 floors | 1 | Ea. | 63,320.00 | $63,320.00 |
| **22 Plumbing** | Add/relocate plumbing fixtures per plans | 7 | Ea. | 1,375.00 | $9,625.00 |
| **23 HVAC** | Rework/replace piping, new boiler, new DX units | 5,077 | S.F. | 18.70 | $94,939.90 |
| **26 Electrical** | Install new electrical wiring, lighting fixtures | 5,077 | S.F. | 13.20 | $67,016.40 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | | | **$332,329.00** |
| | Architectural & Engineering Fees | | | 9% | $ 29,910.00 |
| | Contingency | | | 20% | $72,448.00 |
| TOTAL ESTIMATED COST | | 5,077 | S.F | $85.64 | **$434,687.00** |




EXISTING
LOWER BASEMENT FLOOR PLAN
SCALE: 1/16" = 1'-0"

N

# SPILMAN HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

EXISTING LOWER BASEMENT FLOOR PLAN

Date: March 2006

Page 1 of 5

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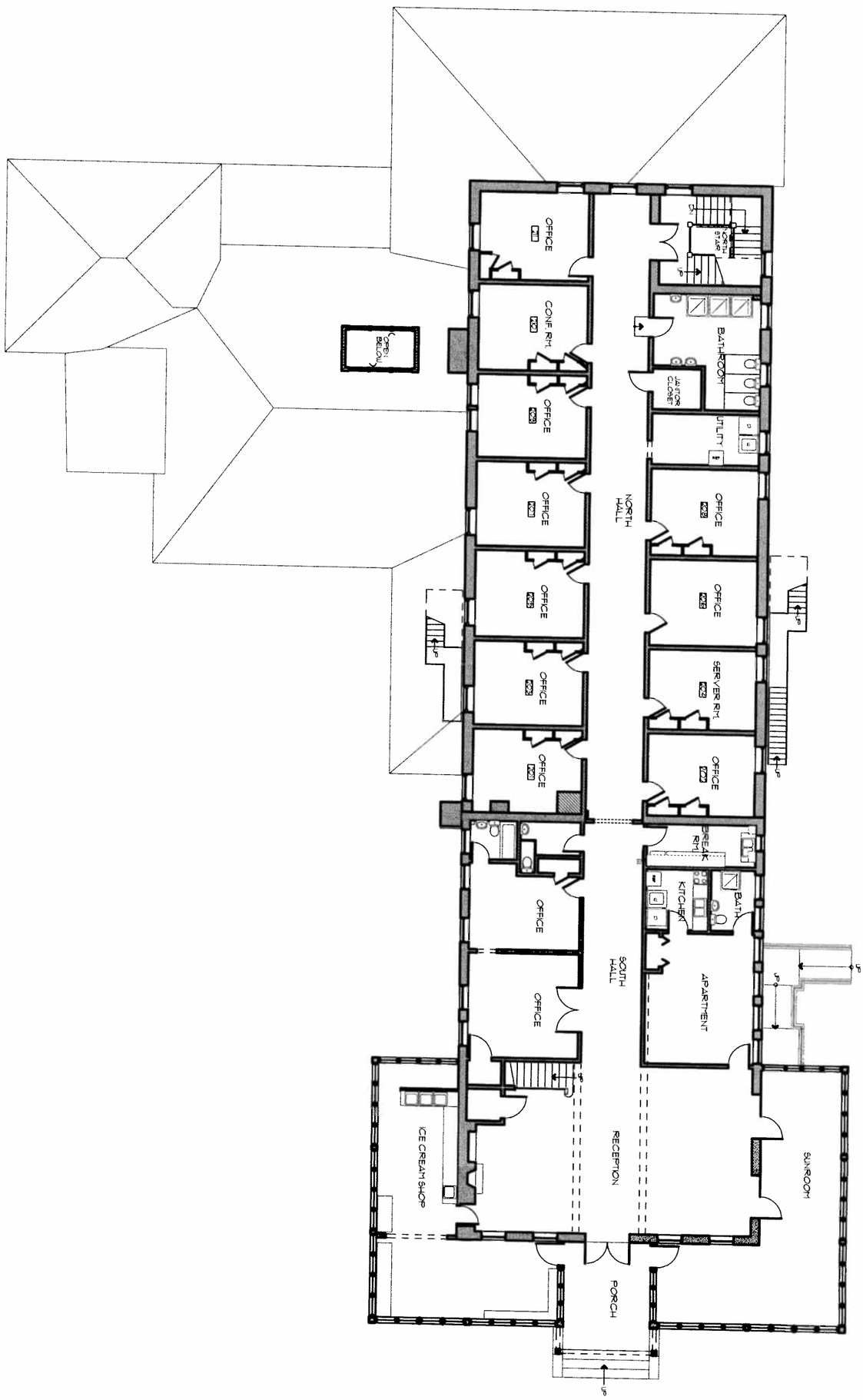
# SPILMAN HALL

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
BASEMENT
PLAN




EXISTING
FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

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# SPILMAN HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

EXISTING FIRST FLOOR PLAN

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SECOND FLOOR PLAN
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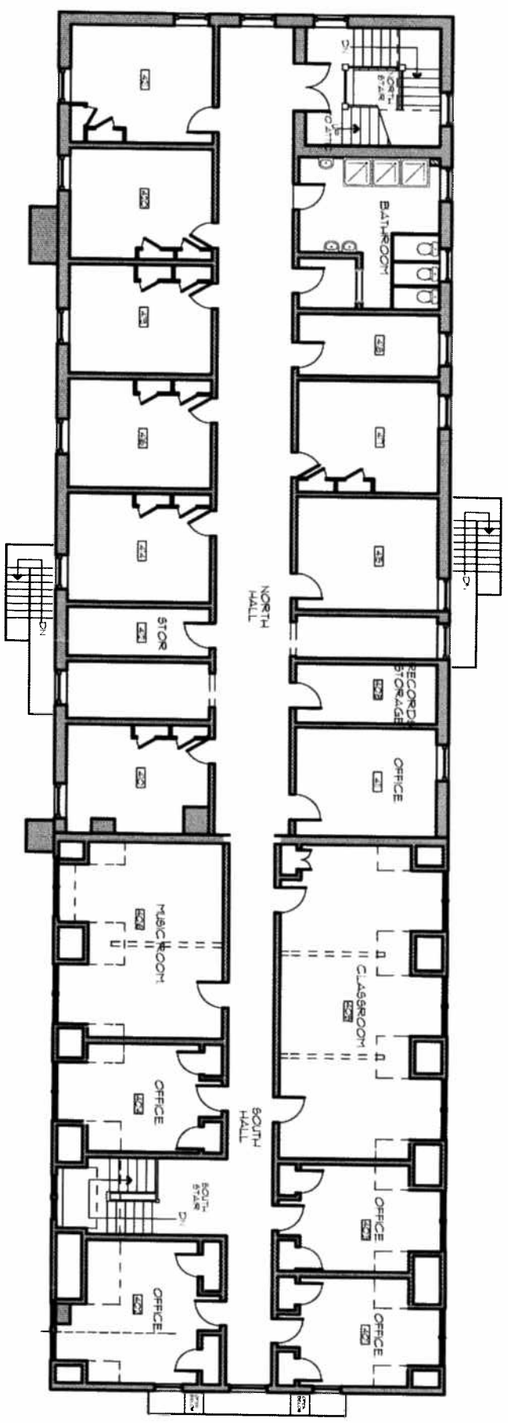
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

EXISTING
SECOND
FLOOR
PLAN




EXISTING
THIRD FLOOR PLAN
SCALE: 1/16" = 1'-0"

N

# SPILMAN HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
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EXISTING
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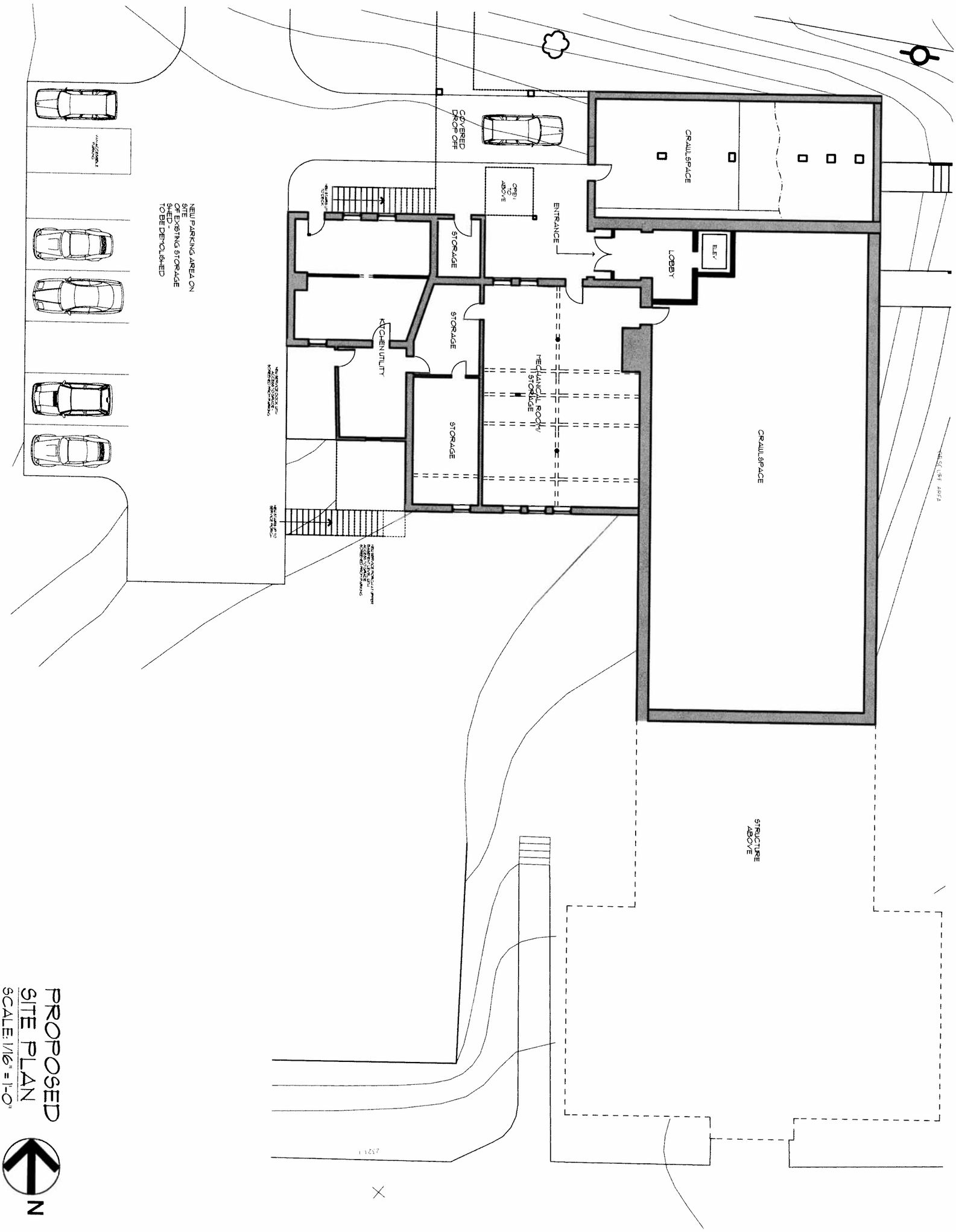


PROPOSED SITE PLAN

SCALE: 1/16" = 1'-0"

# SPILMAN HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED SITE PLAN

Page 1 of 6

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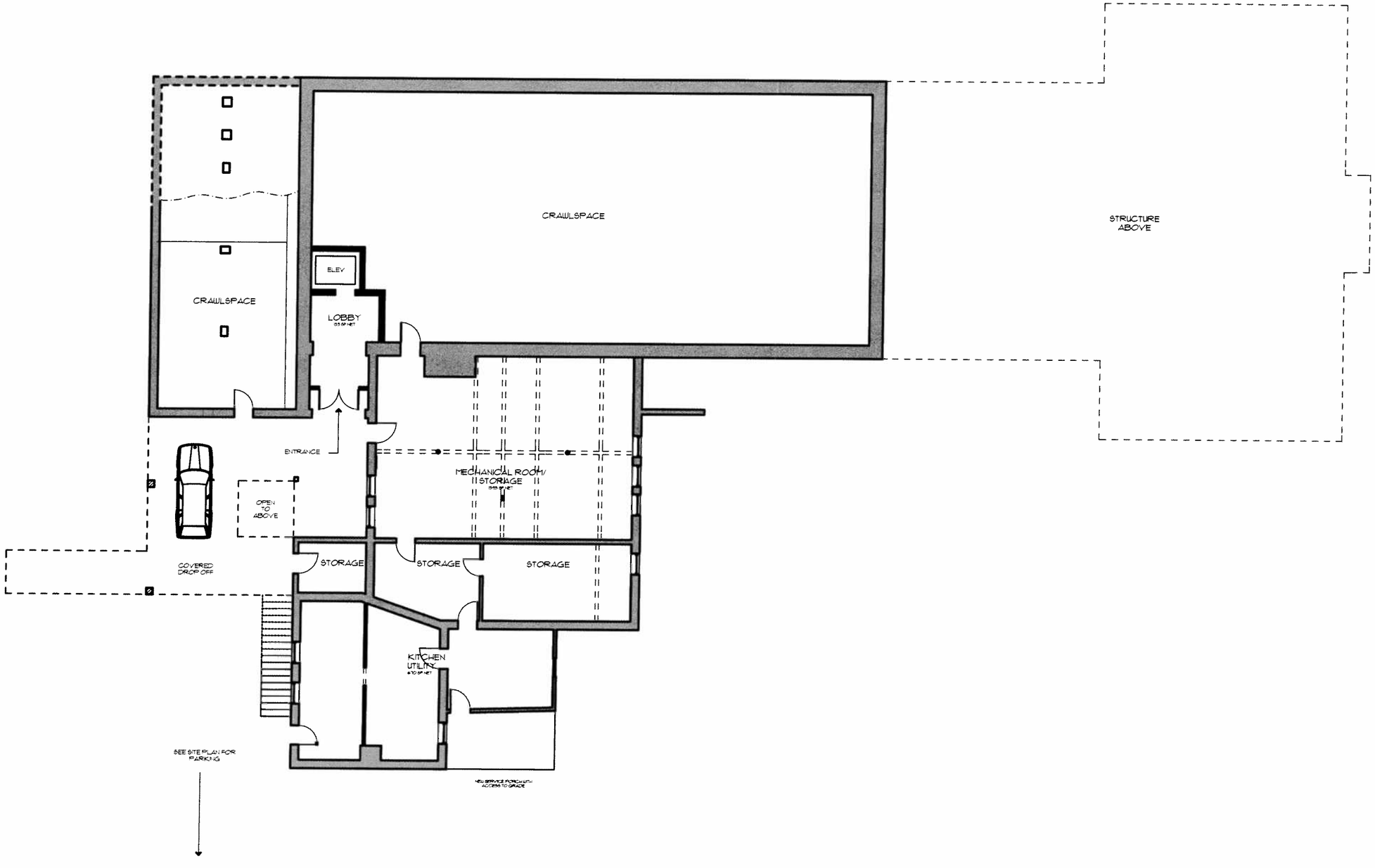


# PROPOSED
# LOWER BASEMENT FLOOR PLAN

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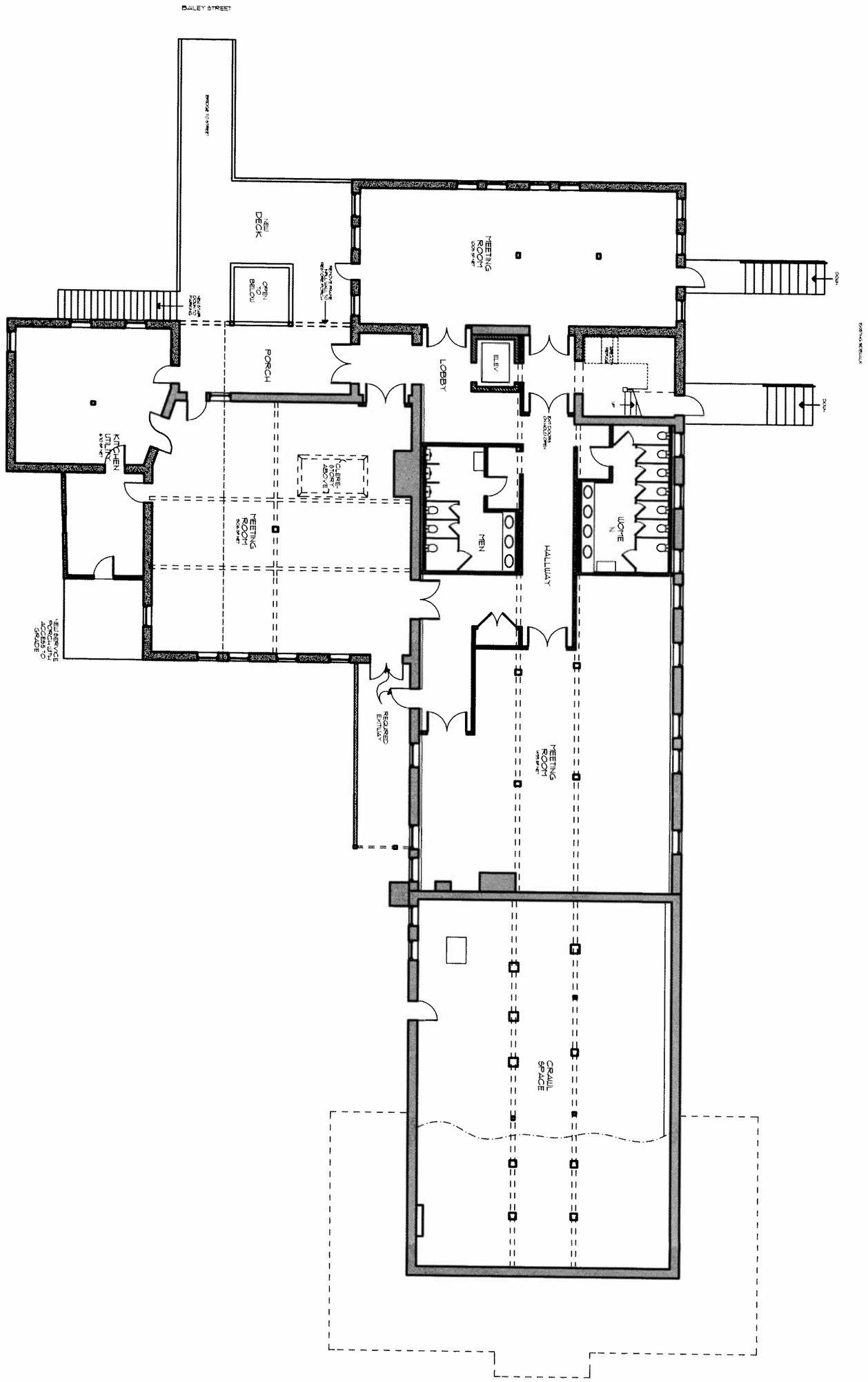
**SPILMAN HALL**
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED LOWER BASEMENT FLOOR PLAN




# PROPOSED BASEMENT PLAN

SCALE: 1/16" = 1'-0"

N

# SPILMAN HALL

## PRESERVATION PLAN

GETTY CAMPUS HERITAGE GRANT PROJECT
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PROPOSED BASEMENT PLAN

PROPOSED
FIRST FLOOR PLAN
SCALE: 1/16" = 1'-0"

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# SPILMAN HALL

PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED FIRST FLOOR PLAN

PROPOSED
SECOND FLOOR PLAN
SCALE: 1/16" = 1'-0"

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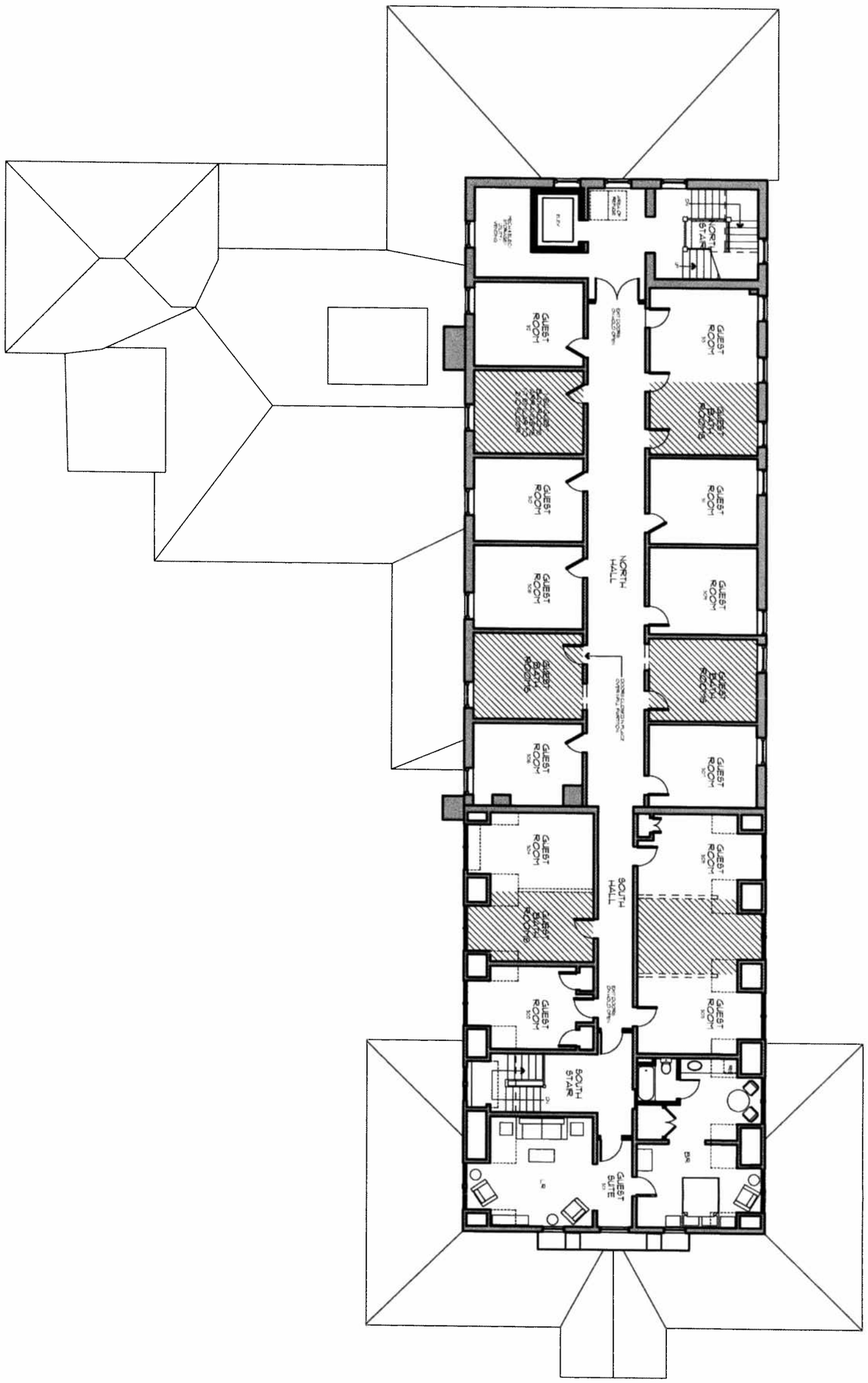
PRESERVATION PLAN
GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
SECOND
FLOOR
PLAN




PROPOSED
THIRD FLOOR PLAN
SCALE: 1/16" = 1'-0"

N

# SPILMAN HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE
MARS HILL, NORTH CAROLINA

Date: March 2006

PROPOSED
THIRD
FLOOR
PLAN

Page 6 of 6

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# SPILMAN HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT

MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

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1 HISTORIC CERTIFICATION

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# SPILMAN HALL

**PRESERVATION PLAN**

GETTY CAMPUS HERITAGE GRANT PROJECT
MARS HILL COLLEGE, MARS HILL, NORTH CAROLINA

**GENERAL INFORMATION**

**Year Built**
1907 as Treat Dormitory for Boys; expanded 1921; 1941 renovations and additions. Renamed in honor of Dr. B. W. Spilman

**Style**
Colonial Revival (Dutch Colonial)

**Architect**
Original building unknown; 1941 Henry Irven Gaines

**Builder**
Unknown

**Original use**
Dormitory, later with Dining Hall and Kitchen

**Current uses**
Offices – Access Program
Offices, classrooms, shop and storage – Theatre Department
Snack Shop
Apartment

**Proposed use**
Conference Center; alternate use for offices and classrooms

**Building area**

| | |
|---|---|
| Lower Basement | 2,622 SF |
| Basement | 7,509 SF |
| First Floor | 7,242 SF |
| Second Floor | 6,030 SF |
| Third Floor | 6,030 SF |
| Total | 29,433 SF |

**HISTORIC SIGNIFICANCE**
Second oldest extant building on campus, oldest remaining dormitory building. Contributing building in the proposed National Register Historic District.

**HISTORIC CERTIFICATION**
Contributing building within the proposed Mars Hill College Historic District, National Register of Historic Places.

**SIGNIFICANT ARCHITECTURAL FEATURES**

**Architectural Significance**
Constructed in 1907, this fine example of the Colonial Revival style features a prominent gambrel roof with substantial gable end dormers lining the roof. The brick gable end exhibits a fine arched center window; other windows are 2-over-2 double hung sash with arched heads. A 1921 addition more than doubled the footprint of the building. It has a plain gabled roof that sits slightly higher than the original building and repeats the window form, but has 6-over-6 sash. This addition also had a two-level wing at the rear to the west that housed large kitchen and support functions. Another smaller, one story addition was made to the rear at a later date for an additional dining room.

**Exterior**
- Original gambrel roof and dormers
- Brick masonry
- Original wood windows (to each historic building section)
- Glass enclosed front porch (ca. 1941)
- Rear addition (ca. 1921) proportions and materials

**Interior**

- Center corridor plan
- Open stairway at lobby
- Surviving original paneled doors
- Surviving original trim
- Fireplace surround at lobby

## HISTORIC IMAGES

Historic images have been gathered from MHC Archives and other sources for this study. Each image is labeled with the source and an identifying number and date when it was provided. If dates were not provided, and estimated dates have been assumed based upon other known dates, such as building construction dates, or clues form the images such as dress or cars. These images are representative of the historical images found and are not intended to be a comprehensive list of all images available. Some have been cropped lightly to fit the format of the report.

Image 1. 1907, Sketch of "The Treat Dormitory for Boys", now Spilman Hall. (*Mars Hill College Quarterly, Volume III, No. 3, June 1907, p. 33.*)

Image 2. 1907, almost completed dormitory. The porch is not complete and there is not a stair to the door on the left. 1907. Note the one story section in the rear, which was later replaced with larger additions and the well in the foreground. (*MHC*)

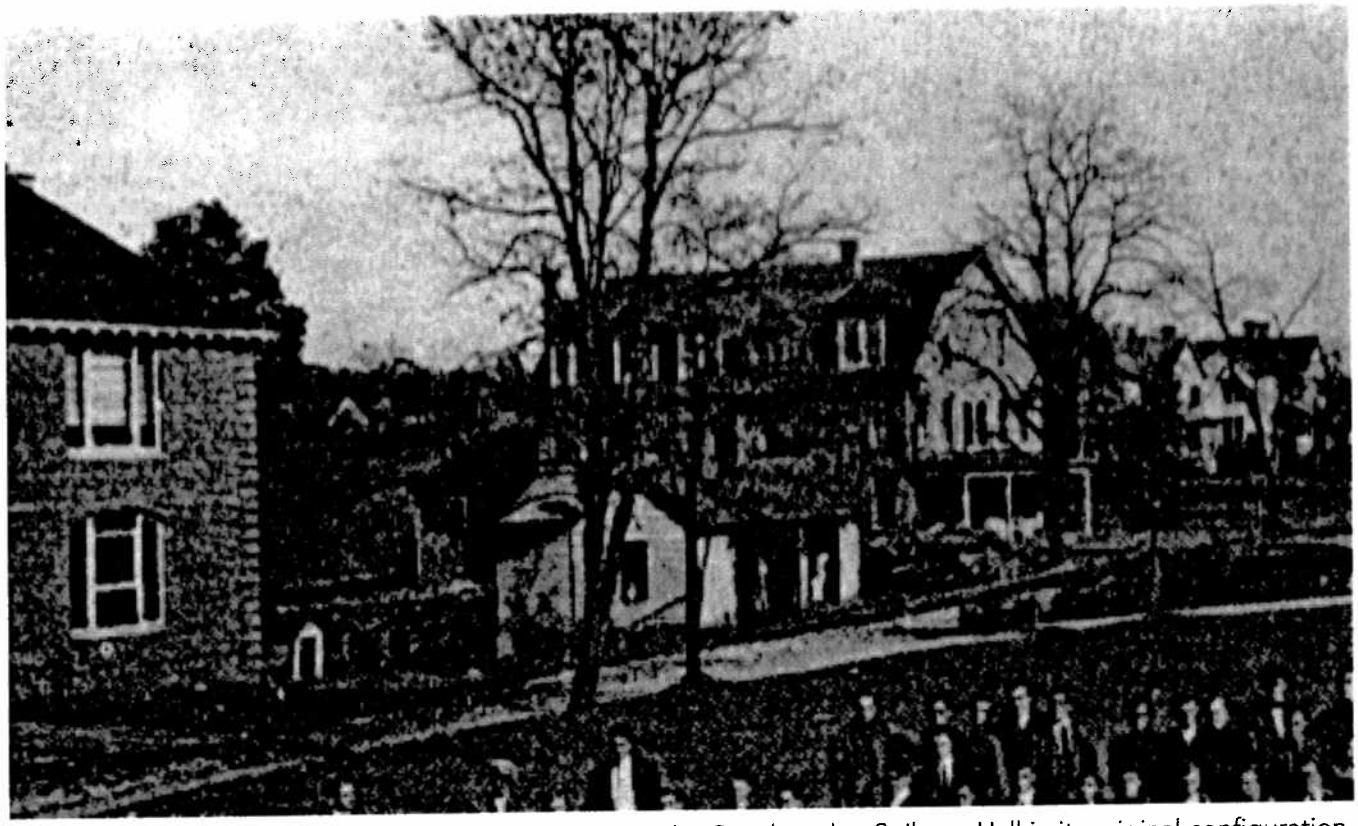
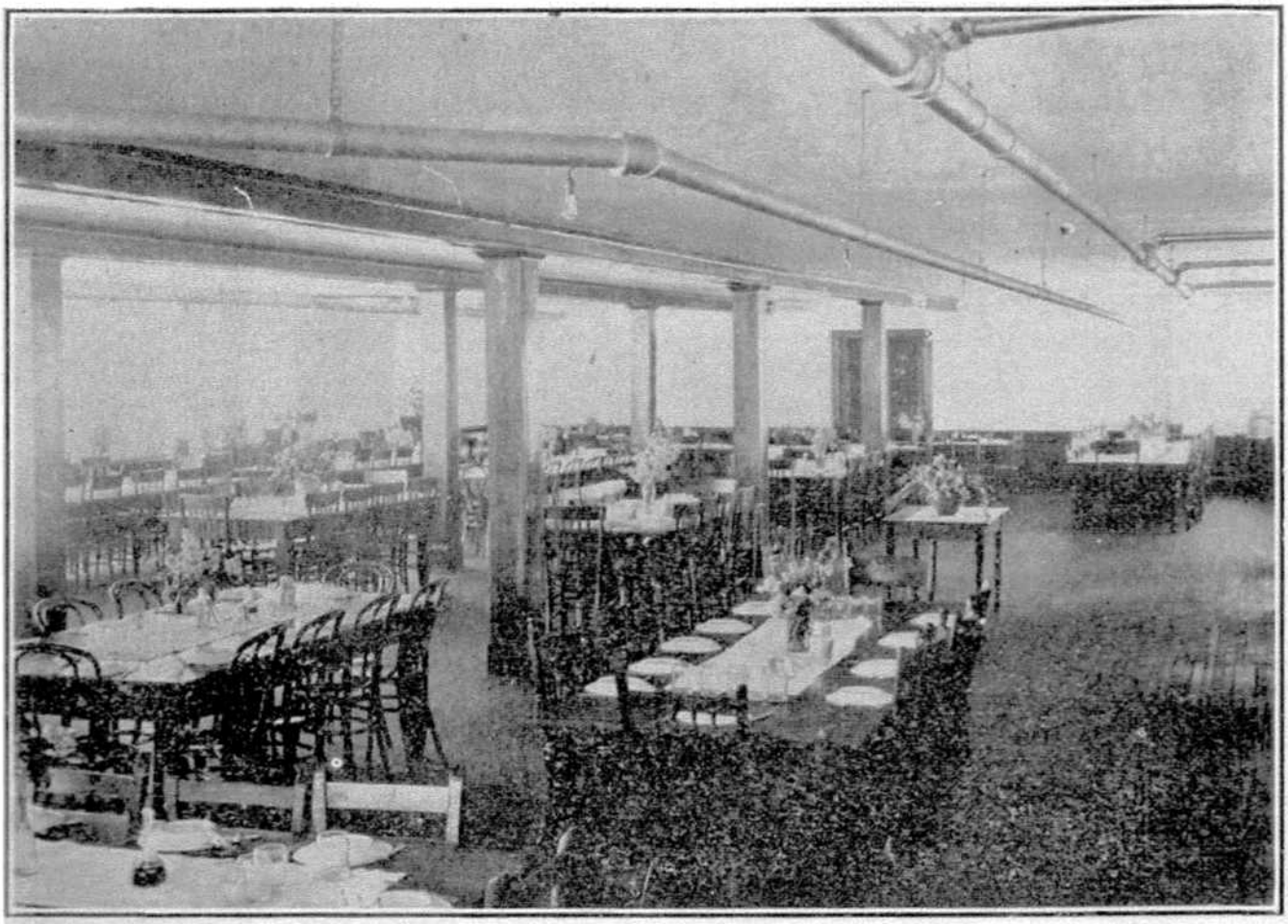


Image 3. 1912, enlargement of a photo of a group on the Quadrangle. Spilman Hall in its original configuration. (*Mars Hill College Quarterly, September 1912 and Catalogue, 1914-1915, p.14.*)

Image 4. 1915, "Treat Dormitory for Young Men," (*Mars Hill College Quarterly, Vol. XI, No.3, June 1915, p. 35.*)



SECTION OF O. E. SAMS DINING ROOM

Image 5. 1922, O. E. Sams Dining Room in the basement, looking north. (*Mars Hill College Quarterly, June 1922, before p 25*)

Image 6. 1928, "Across the Campus." The kitchen wing does not have a light monitor on the roof. (*The Laurel, 1928*)

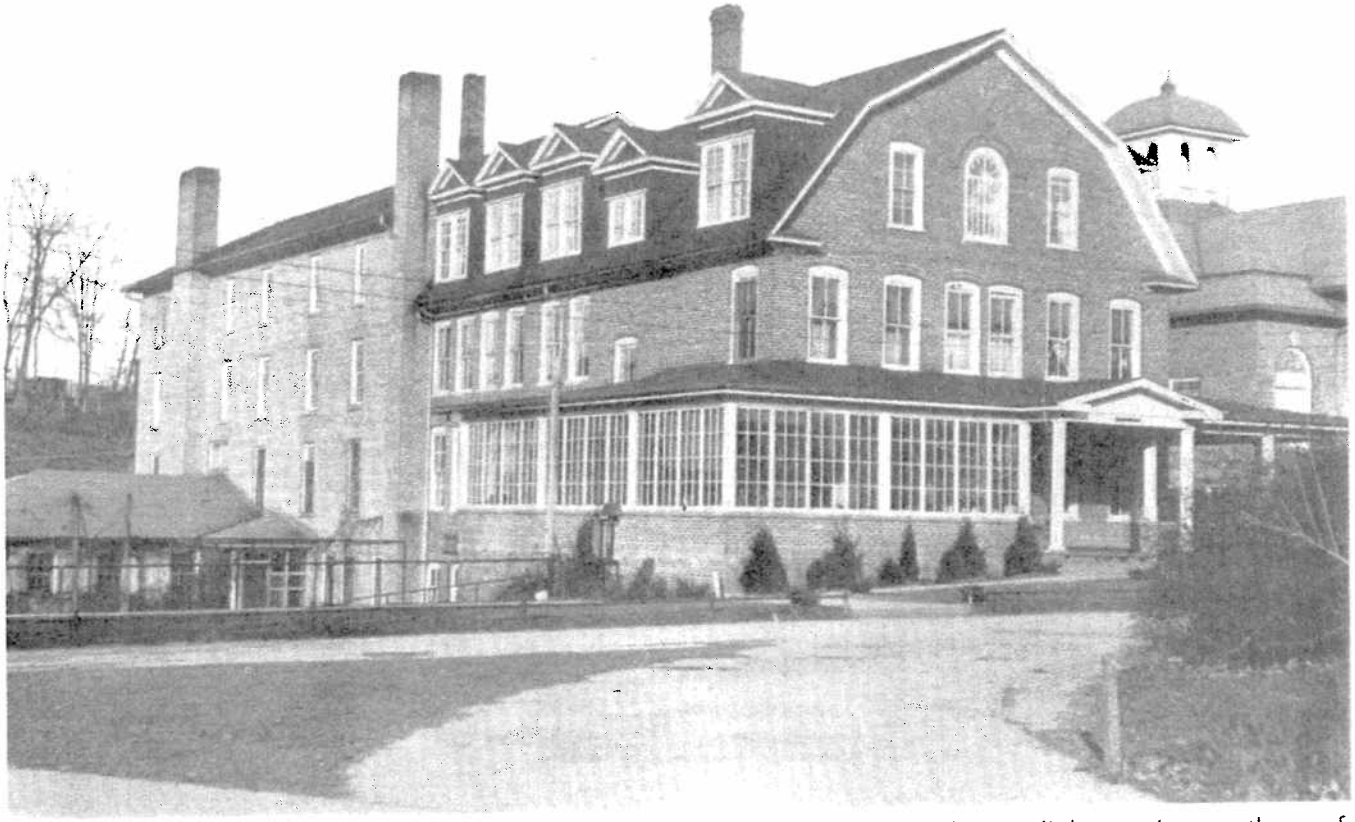


Image 7. 1930, "Spilman Home." The kitchen addition to the left does not have a light monitor on the roof. (*The Laurel, 1930.*)

Image 8. View of street, 1935, as dated by the license plate on the car. Note that the right side of the front porch is not enclosed. (*MHC 83-6-458*)

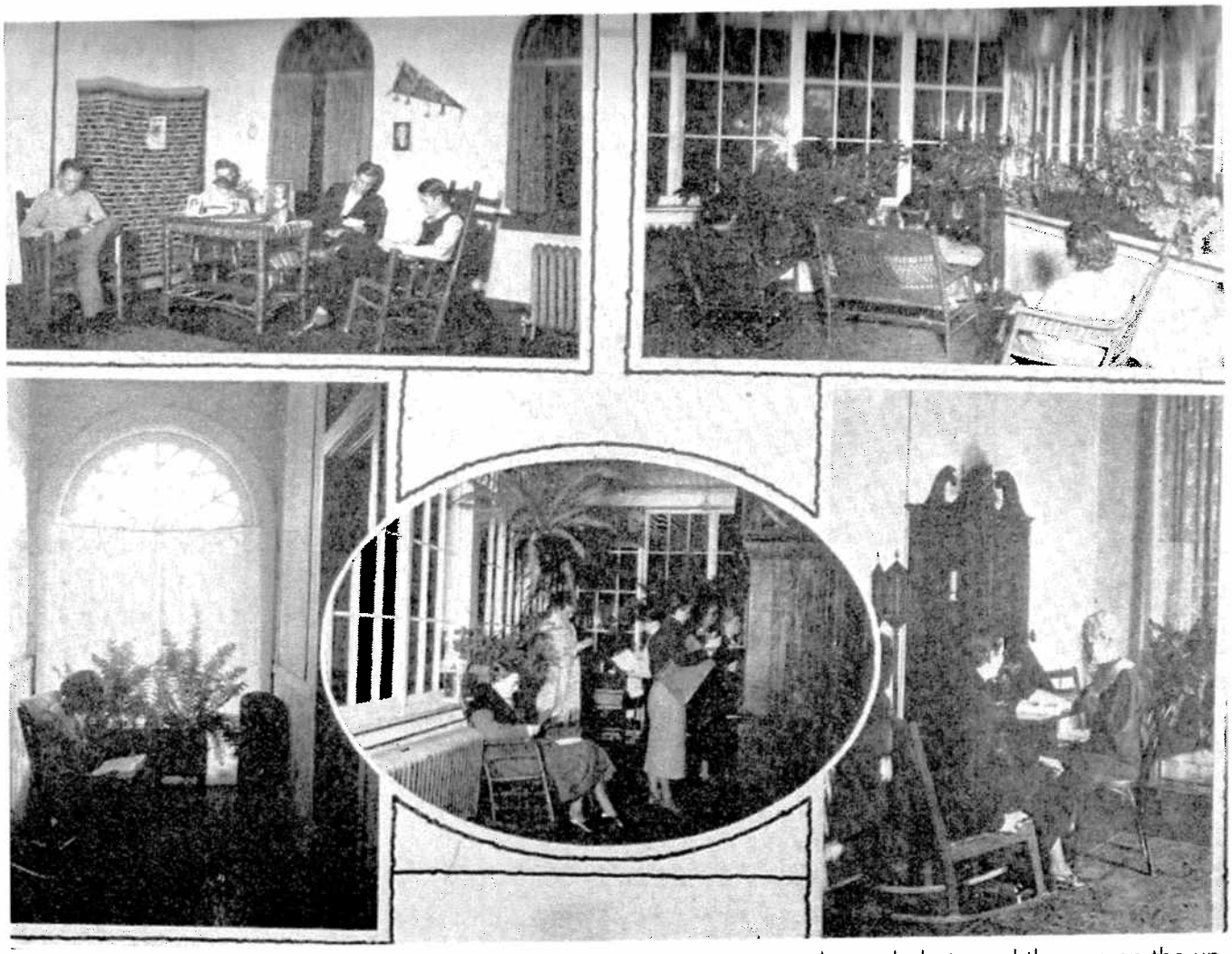


Image 9. 1935, "Campus Life." Interior views of dormitories on campus, the oval photo and the one on the upper right are of the sunrooms on the front of the building and the one on the lower left is of the front window in the corridor on the second floor. (*Mars Hill College Quarterly, March 1935, after p. 80*)

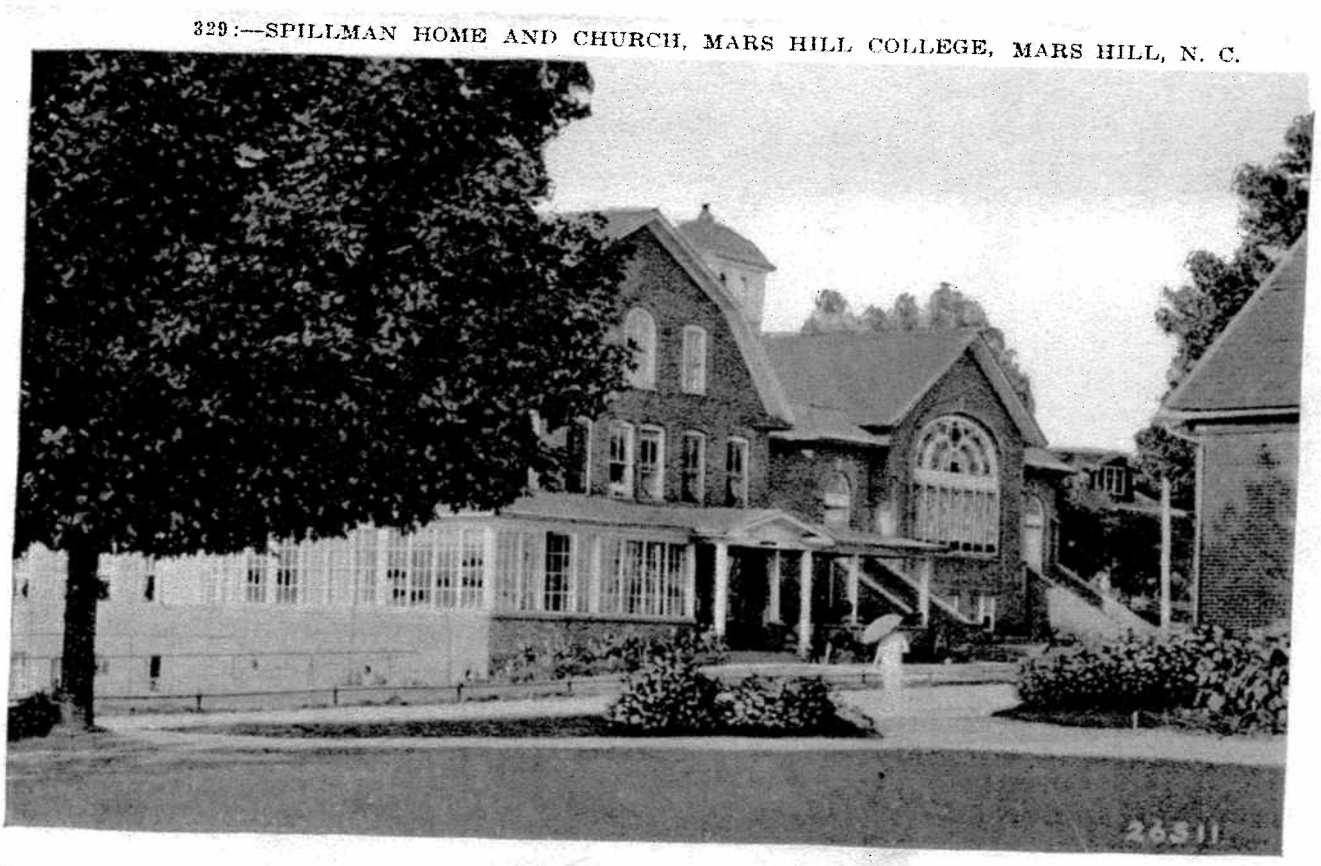



Image 10. Before 1941, postcard view. The right side of the porch was enclosed in 1941. (*MHC ac088*)

Image 11. After 1930 and before 1941. The light monitor has been added on the kitchen wing and the east side of the front porch has not been enclosed. (*MHC 83-6-427*)

Image 12. Date unknown, Dining Room in the basement, looking north. Similar view to image 5. (*MHC*)

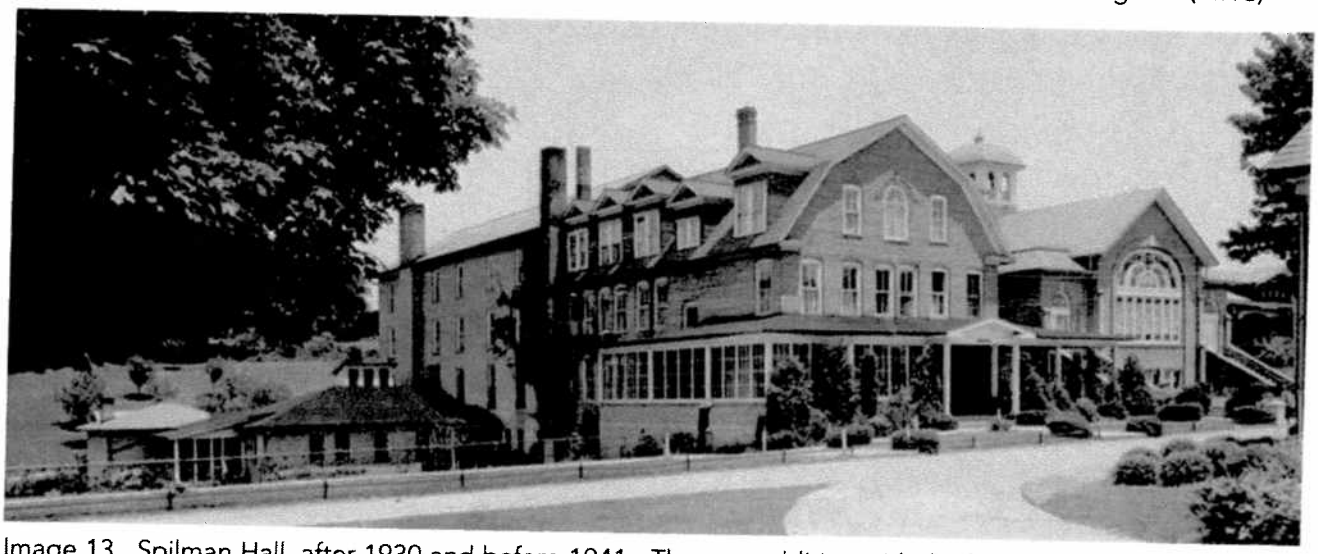


Image 13. Spilman Hall, after 1930 and before 1941. The rear addition with the kitchen wing has a screen porch to the west (left), which is now enclosed.

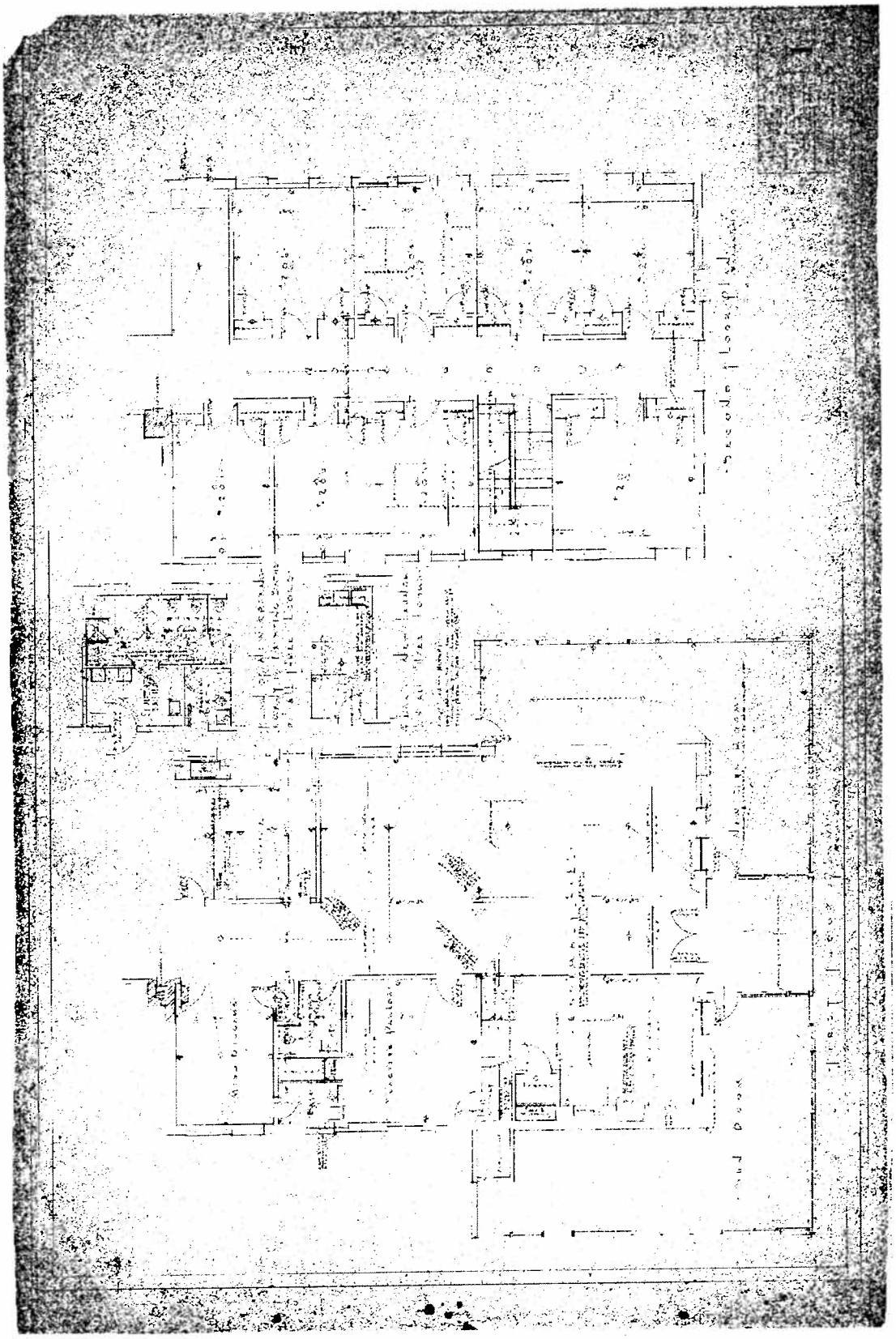


Image 14. May 13, 1941. Alterations designed by Henry Irven Gaines, Sheet 1. These alterations enclosed the east side of the front porch and renovated the original 1907 portion of the building. (*MHC Facilities*)

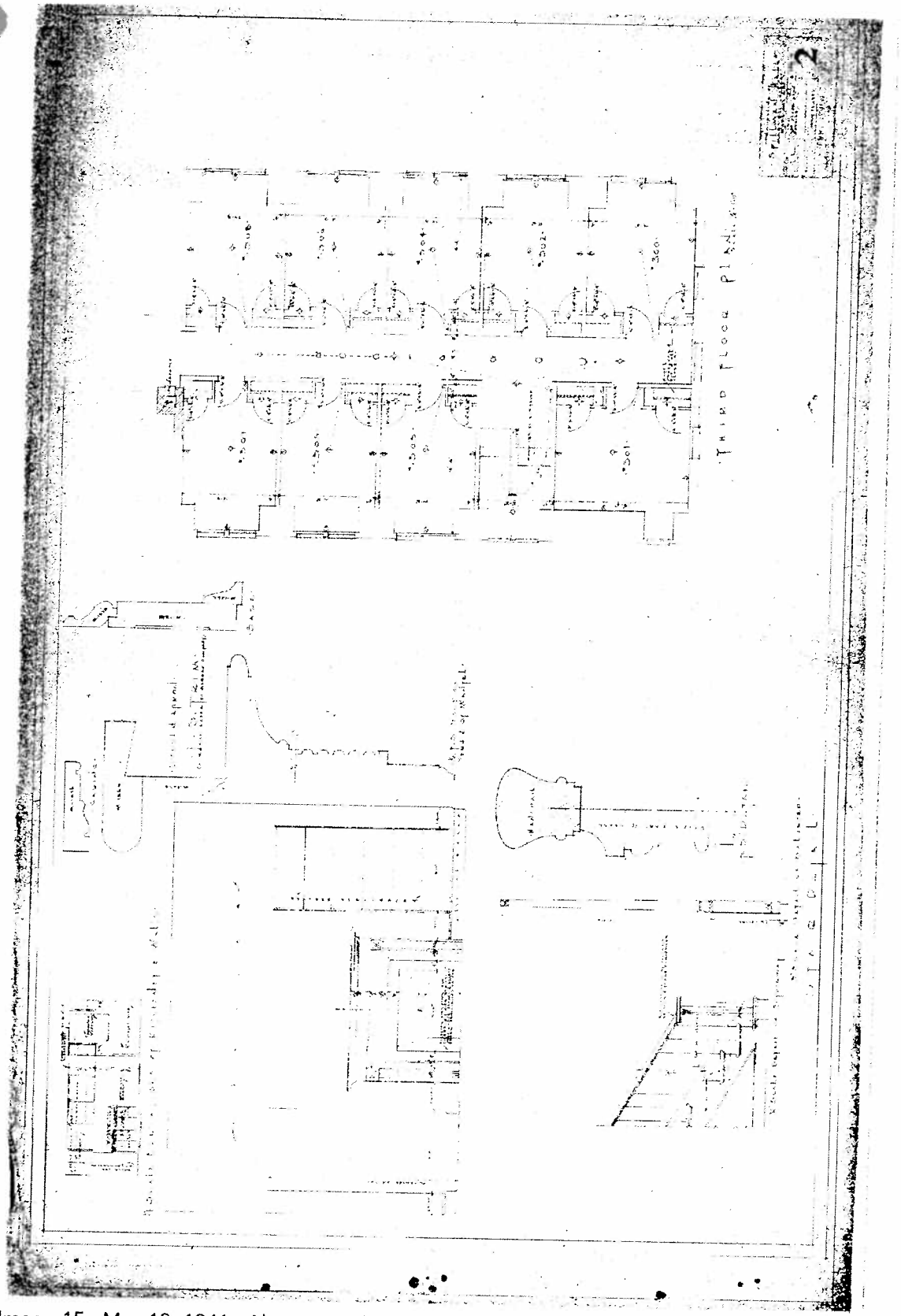



Image 15. May 13, 1941. Alterations designed by Henry Irven Gaines, Sheet 2. (*MHC Facilities*)

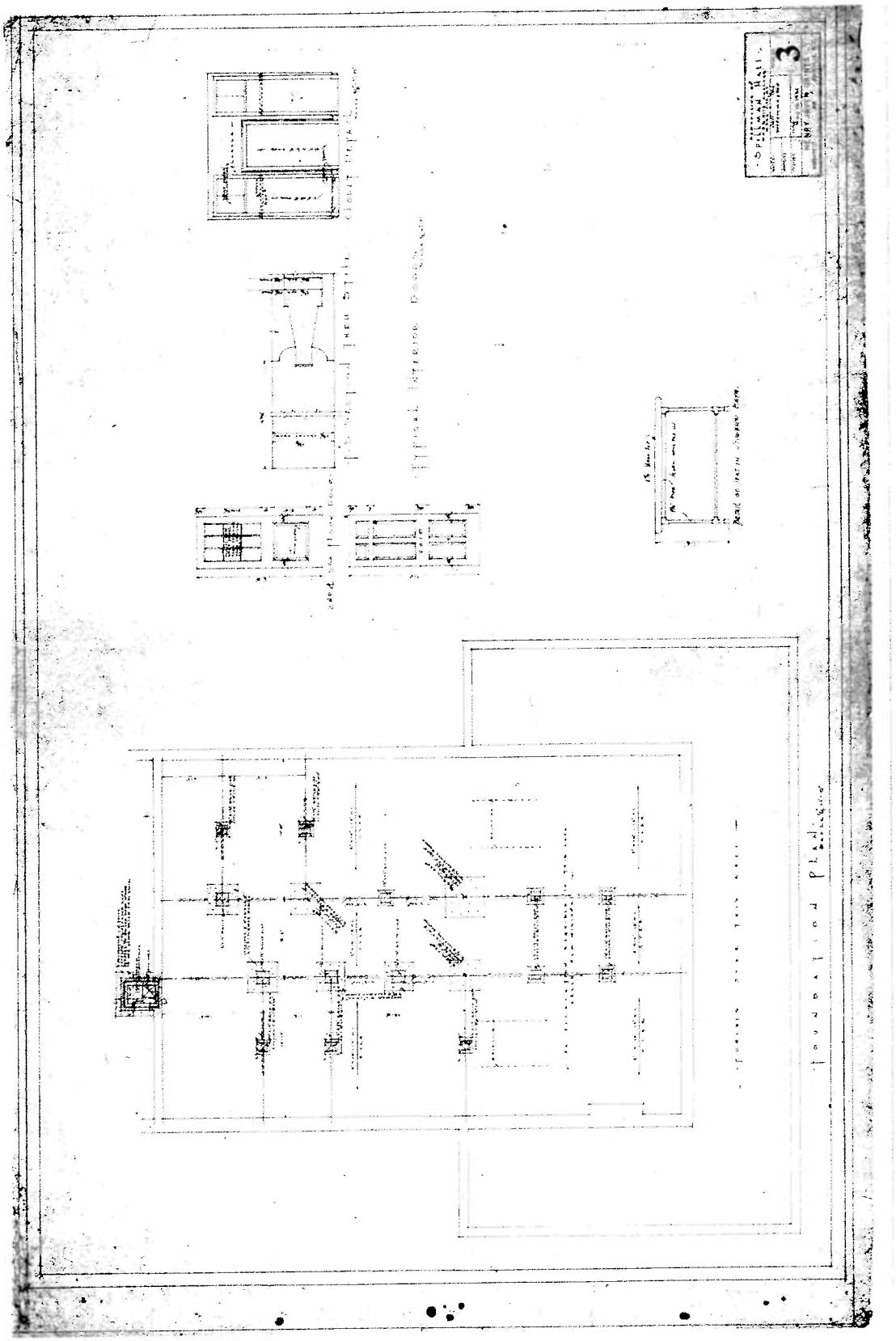


Image 16. May 13, 1941. Alterations designed by Henry Irven Gaines, Sheet 2. (*MHC Facilities*)

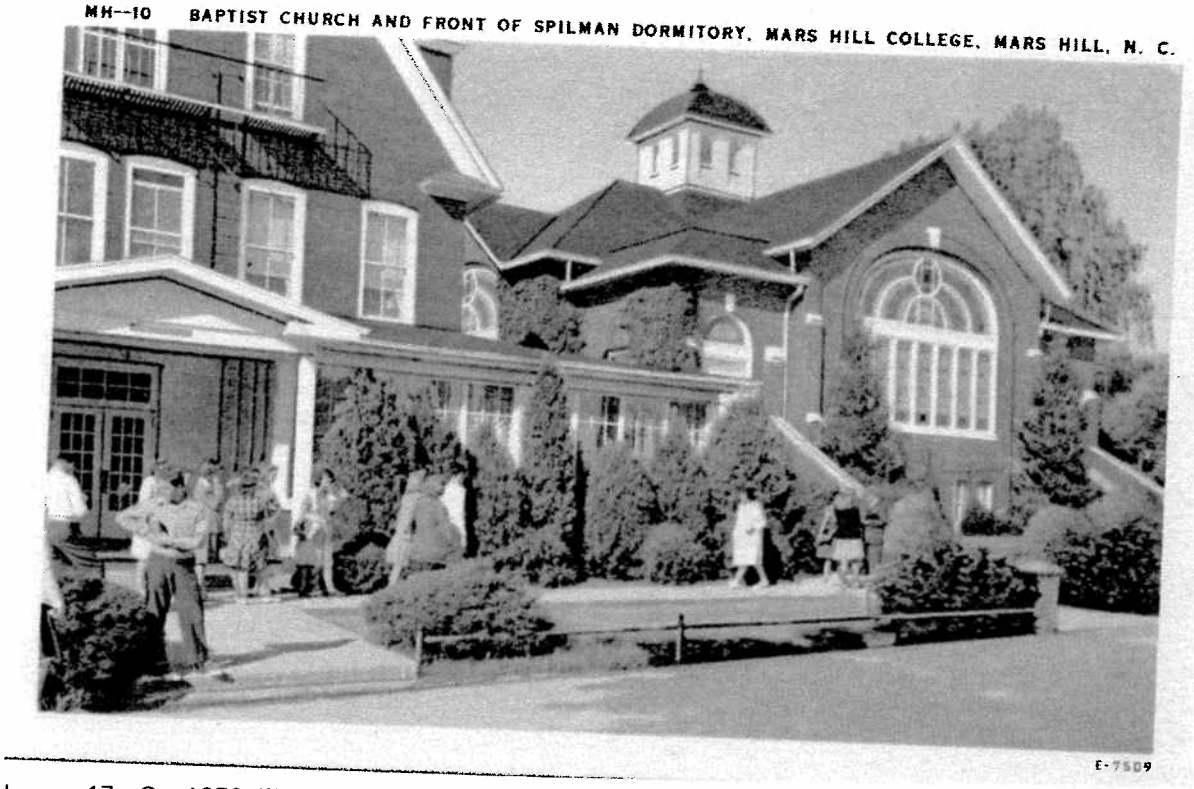



Image 17. Ca. 1950s(?). Postcard view. (*MHC ad098*)

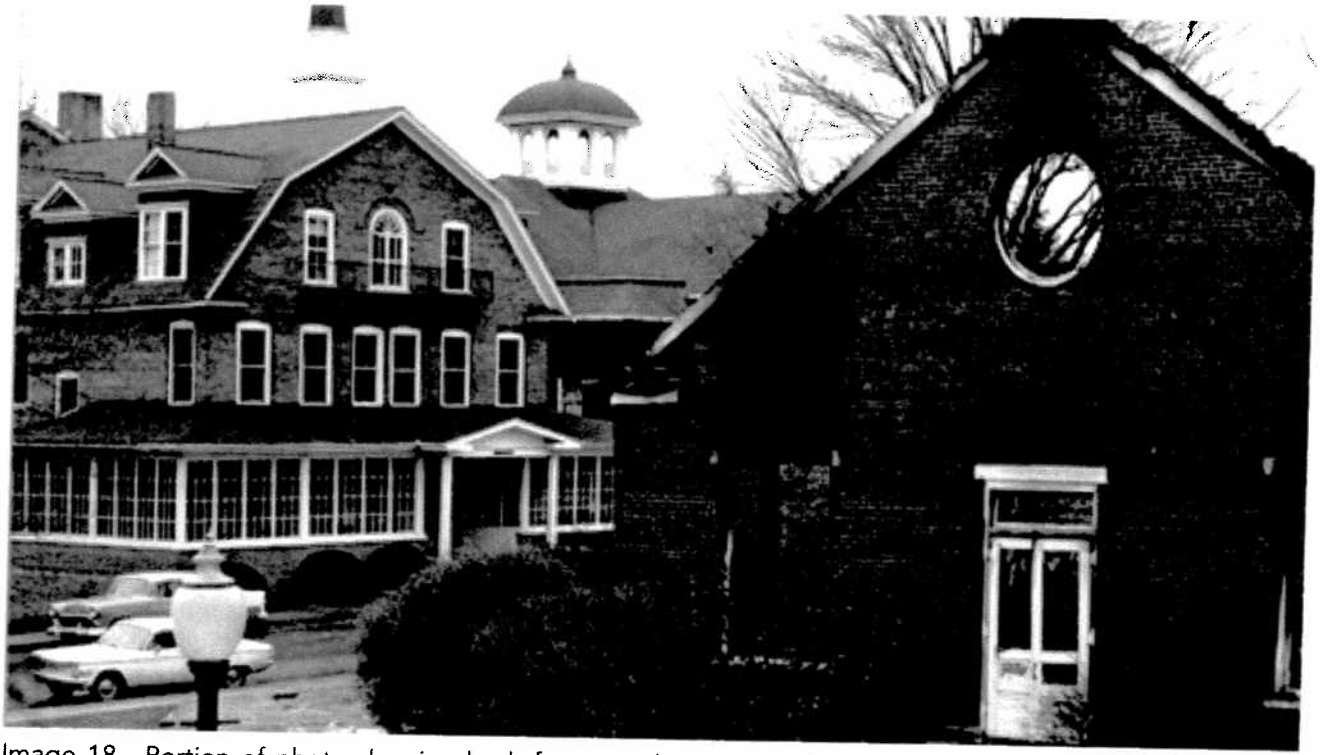


Image 18. Portion of photo showing both front porches enclosed and the addition of the fire escape on the front, 1961, the day after the Auditorium Building burned. The fire escapes can be seen in aerial photos of the campus and predate 1955. (*MHC DN-unnumbered-k*)

## ARCHITECTURAL DESCRIPTION

Spilman Hall as it stands today has had many additions and alterations from the original Treat Dormitory constructed in 1907. The earliest section is the front (south) which is two and one-half stories tall with a basement. The top floor is under a front-facing gambrel roof with side dormers that gives the building its Dutch Colonial character. Exterior walls are brick with single wood double hung windows and interior wood framing. The front facade is divided into five bays on the lower two floors and three bays on the third floor. Side facades are punctuated by regularly spaced arched window openings with gabled roof dormers with paired windows above.

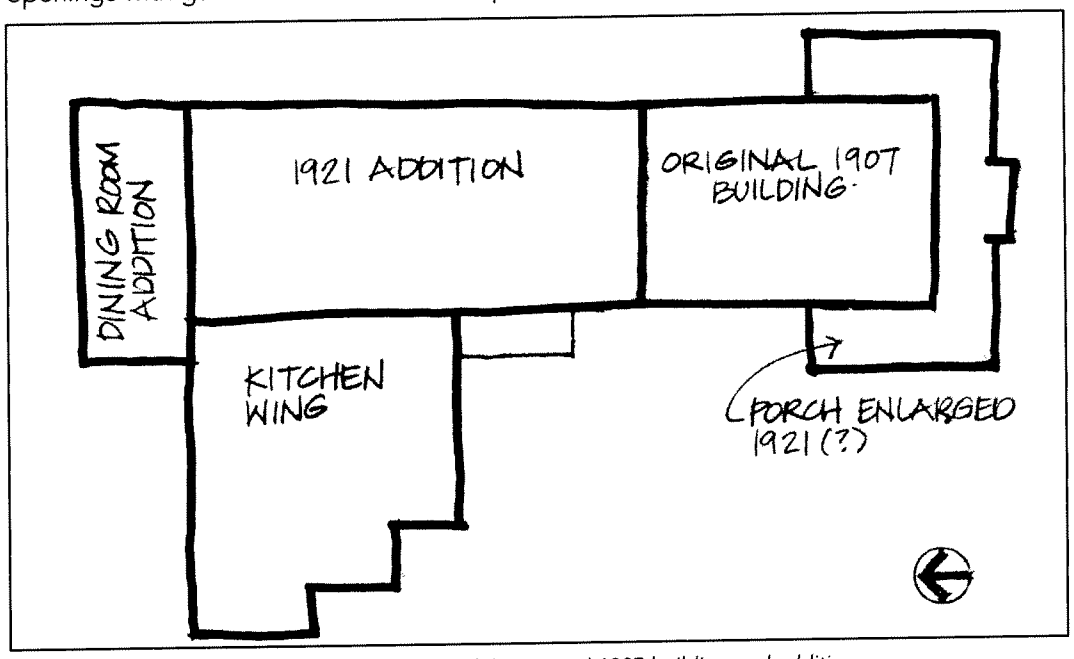



*Figure 1. Diagram of construction chronology of the original 1907 building and additions.*

Rear additions to the building more than doubled the size of the building and were constructed in several stages, although the dates and exact progression of these has not been studied in detail. All were generally built of brick exterior walls with interior wood framing and wood framed roofs, with some steel structural members.

A large three-story addition with a basement that is the same width as the original building was the first addition, constructed in 1921. This continued the central hall plan of the original building and also had a basement level which is approximately on-grade due to the slope of the site. The roofline, however, is different as it is a gable roof with a ridge that is higher than the original gambrel roof. The basement level was used as a Dining Hall (*Image 11*) that was served by two-story kitchen section to the west. The kitchen was on the same level as the Dining Room (basement on the measured drawings), which is lit by a large monitor, and it had a lower basement level for storage.

Another one-story addition to the rear (north) enlarged the area of the Dining Hall at a later date. Other alterations to the kitchen wing were made over time, including enclosing areas that were originally porches and adding exterior decks to the rear.

The front porch was originally the same width as the building with four round or square columns. (*Image 3*) A rendering of the building indicates that this porch was intended to have heavier columns and a balustrade on the roof. (*Image 1*) The porch was later significantly enlarged to a larger footprint that is wider than the width of the building,

probably at the same time as the other additions. This porch was later enclosed as sun-rooms. The west side was enclosed prior to 1941 and the right side was enclosed in 1941 as part of the alterations designed by Henry Irven Gaines. (*Images 7-9*)

Besides the enclosure of the front porch indicated on Gaines drawings from 1941, alterations were made at that time to the interior of the original building. (*Images 7-9*). These included opening up the front portion as a living room/lobby with renovations to the fireplace and main stair. Other alterations included closets in the dorm rooms, new bathrooms, and electrical upgrades.

Further alterations were made as the use of the building changed from a dormitory to offices and classrooms. These included covering most of the walls with pre-finished plywood paneling, covering the transoms over the doors, and the original plaster. All of the original wood floors were also covered with vinyl tile or carpet over a layer of particle board. Even the wood treads on the main stair were covered with this treatment with vinyl nosings. A few rooms have also been enlarged by removing walls to make larger rooms for classes.

The dining room areas were turned into classrooms and are now used for set and costume storage by the theater department, which uses most of the building. A costume shop is now in the rear dining room addition and the kitchen area is now used as a wood shop for set construction.

Exterior Walls: Brick of varying color and bond pattern.
Windows: Wood double hung with varying light configurations.
Doors: Wood panel; wood and glass
Roof: Stamped metal; composition shingle, front section replaced 2004

**ARCHITECTURAL CONDITION ASSESSMENT**

The building appears to generally be in sound condition although most of the building has either been heavily renovated on the interior or has been used as storage for a long period of time. Many areas of the building have significant water damage due to leaking roofs or poor exterior drainage and need to be addressed.

The original interior of the building appears to have been modest with simple flat wood trim, smooth plaster walls and wood doors. Past renovations have almost completely obscured original finished surfaces. Most of the floors have been covered with a layer of particle board and vinyl tile or carpet and many of the walls have been covered with plywood paneling nailed to the face of door and window trim. Windows, some of the doors, and most of the wood trim do remain from the original building and its additions, which make it possible to return some of the original character of the building.

The exterior is generally in good condition, although some repair work is needed to the brick masonry and wood trim. It appears the roof of the front, original portion of the building was replaced in 2004. Other areas of the roof may need work as well in the near future. The windows and doors range in their condition as some are in good condition while others are very deteriorated. These will need to be repaired and possibly insulated with storm windows. (Replacement may be an option, but is usually frowned upon for historic buildings.)

**Hazardous Materials and Conditions**

The presence of lead-based paint in the building should be assumed due to the age of the building. Asbestos-containing insulation may be present on existing heating pipes and other mechanical equipment. Asbestos may also be present in other materials, including flooring tile, mastics, acoustical tile ceiling tiles, plaster and gypsum wall board joint compound. Mold can be present wherever water damage or high humidity is present. The basement is an obvious problem area, as it smells very musty and is full of costumes and furniture that tend to hold moisture.

Any planned work that involves the removal or disturbance of existing paint, asbestos-containing material or large areas of mold-contaminated materials should be preceded by investigation by a licensed environmental consultant. See the Introduction for additional information.

## CURRENT PHOTOGRAPHS

Photo 1. South (main) and east facades from the Quadrangle.

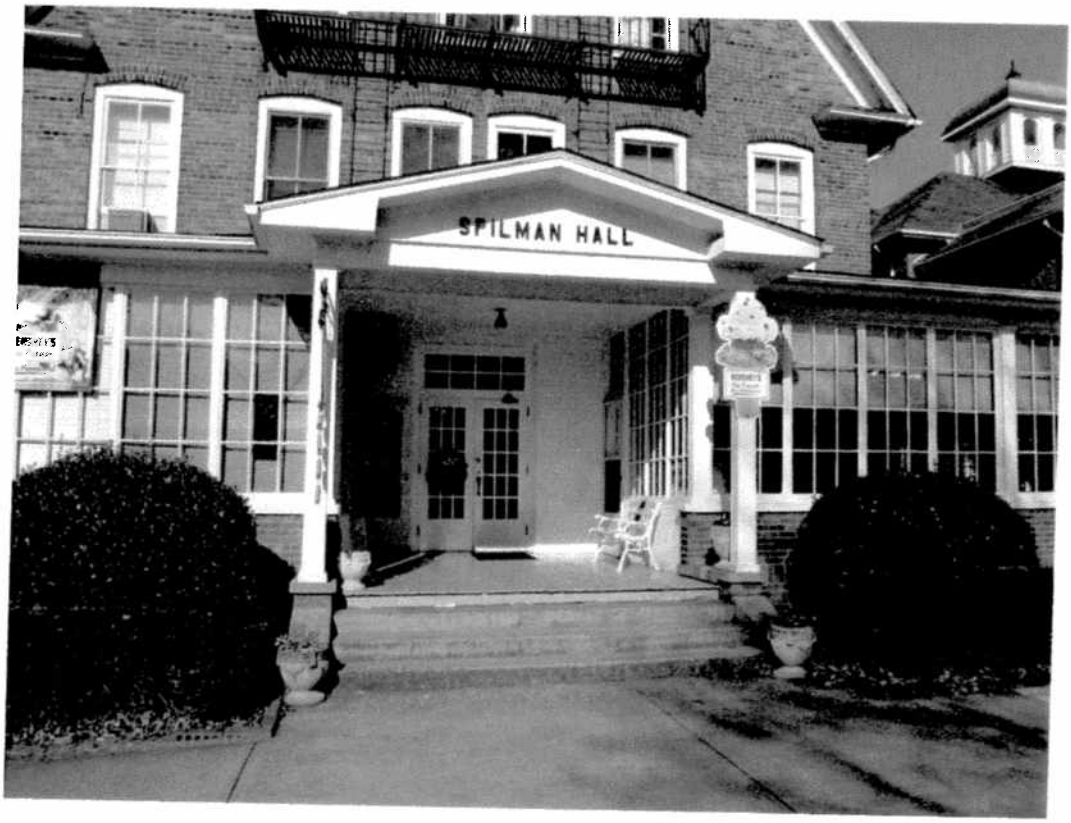



Photo 2. Main entrance porch.

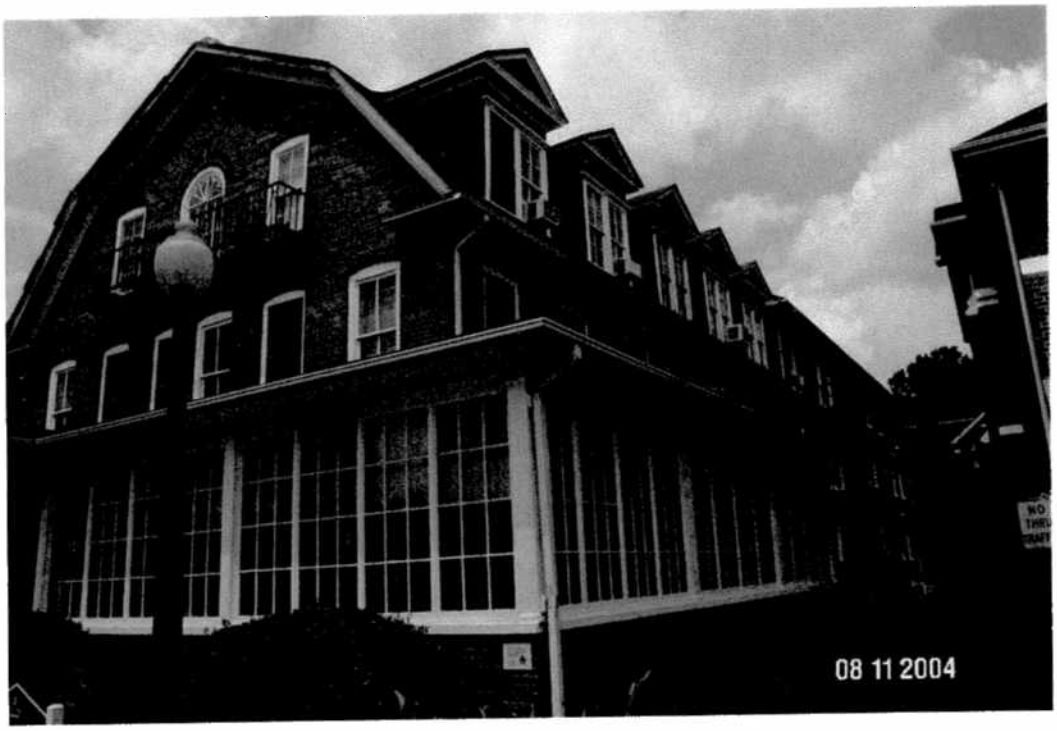



Photo 3. South east corner of the building looking north.

Photo 4. North and east facades.

Photo 5. Ground conditions at the east facade.

Photo 6. North and west view.

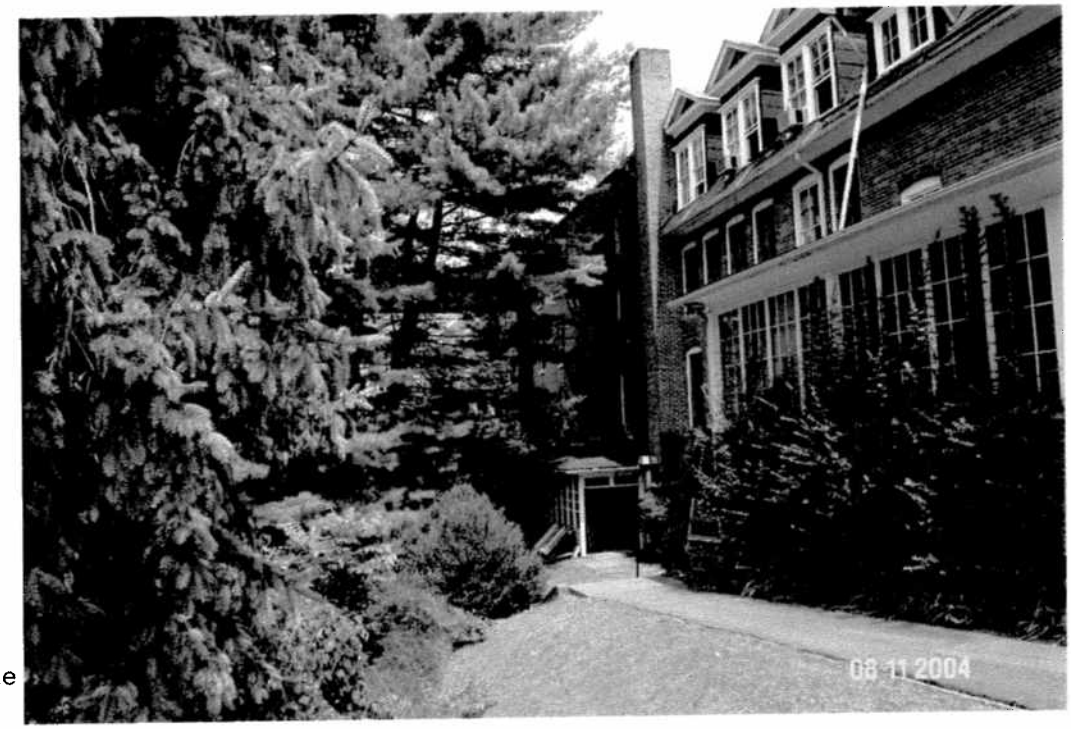



Photo 7. Portion of the west facade.

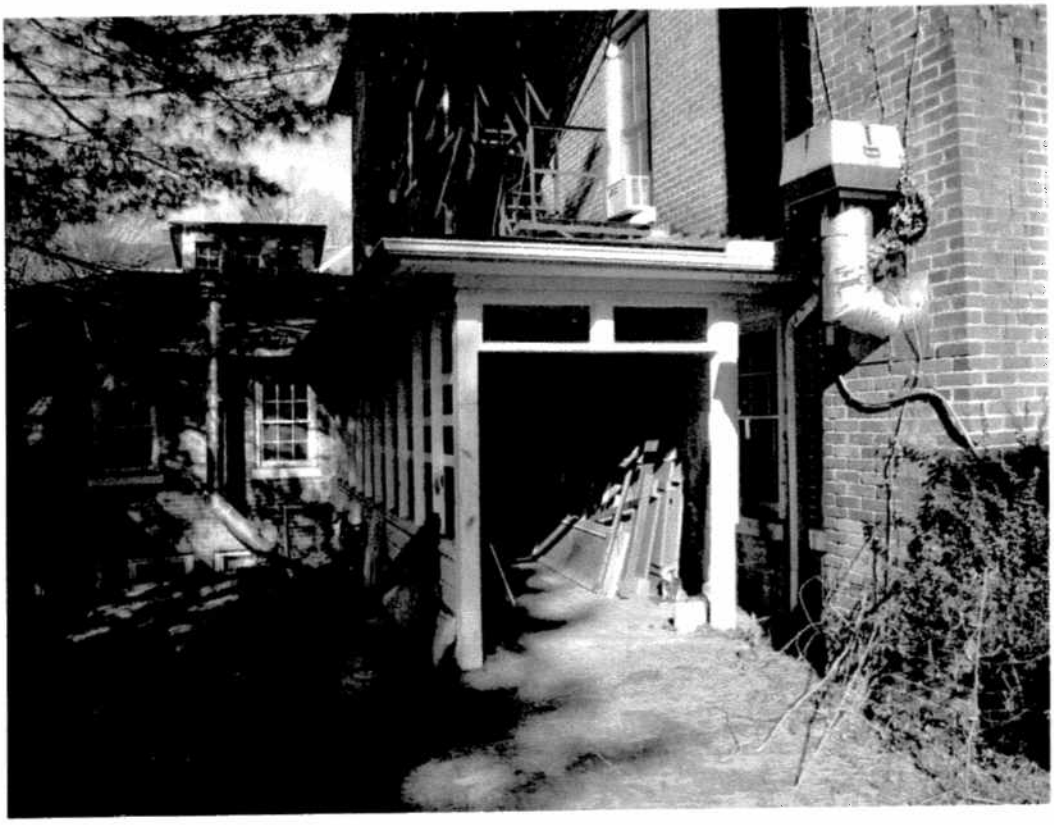


Photo 8. Entrance porch on the west side that lead to the dining room in the basement, which is now storage for the theater department. The section to the left was originally the kitchen.

Photo 9. Main lobby looking north.

Photo 10. Main lobby looking west.

Photo 11. First floor corridor, looking north.

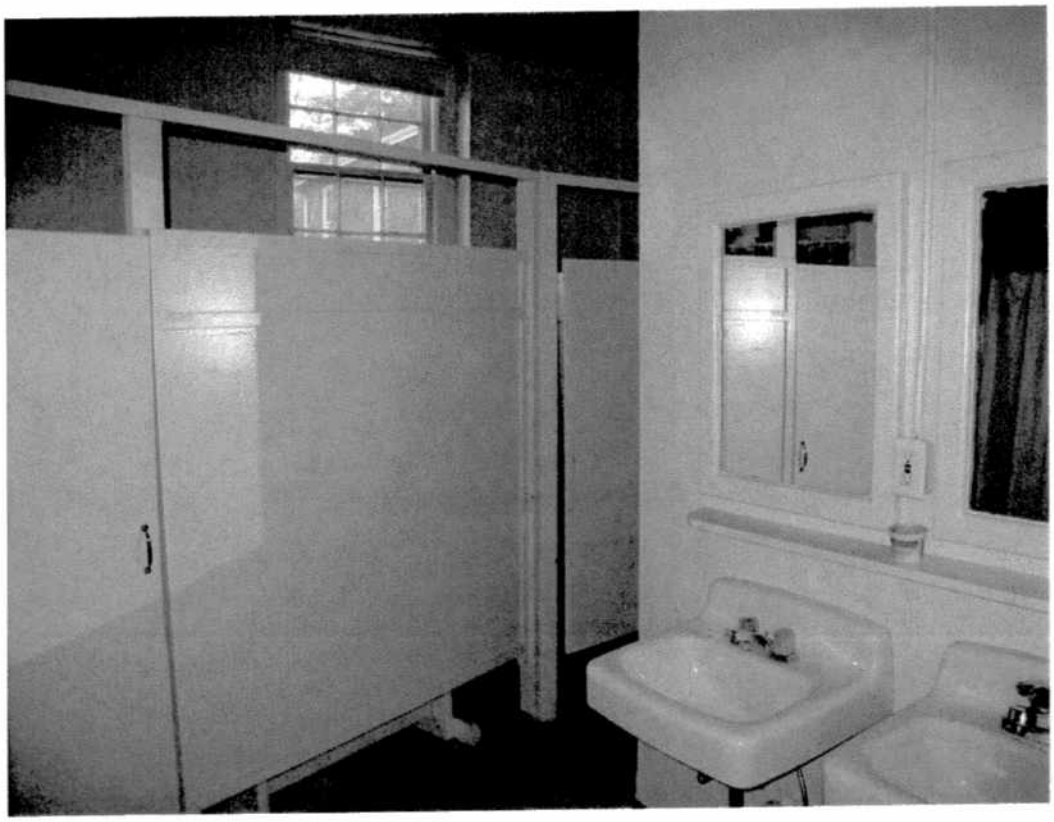


Photo 12. First floor restroom, typical of other floors. This restroom is lockable and is used by both men and women.

Photo 13. Rear stair looking down.

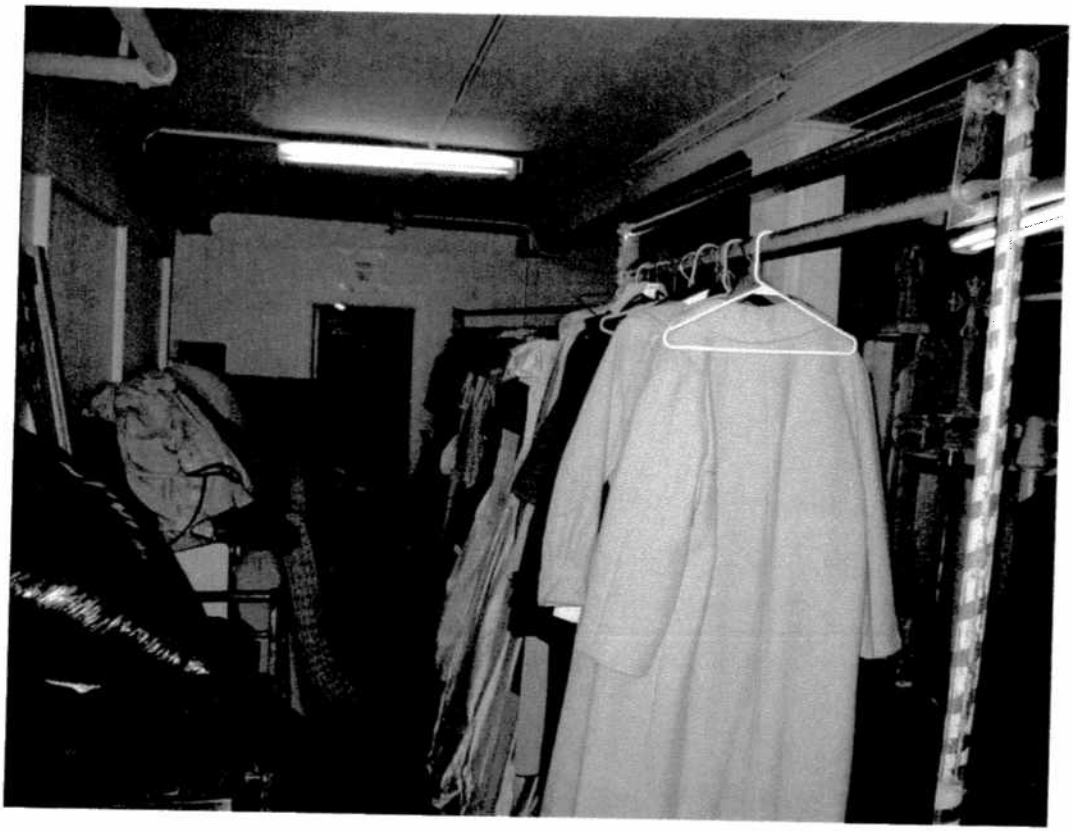


Photo 14. Costume and prop storage area, formerly the dining hall.

Photo 15. Costume storage area, former dining hall, lower level.

Photo 16. Second floor corridor, looking south. Dark area on the ceiling is exposed lath from missing plaster. Five panel doors are original to the building and there are transoms over most of the door that have been covered with the plywood paneling.

Photo 17. Second floor corridor, looking north.

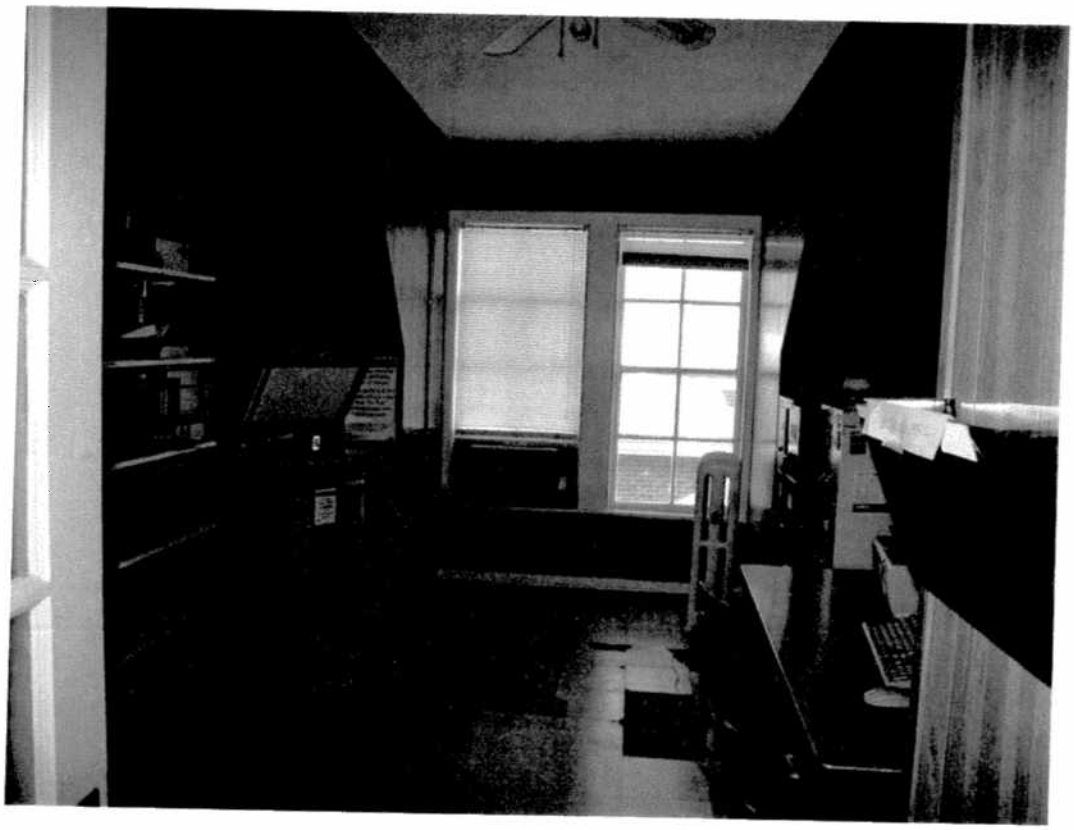


Photo 18. Third floor, typical room.

Photo 19. Third floor, corridor looking south at fan window.

Photo 20. Third floor, typical classroom.

Photo 21. Third floor, corridor looking north.

Photo 22. Third floor corridor, looking south.

Photo 23. Main stair at 3rd floor landing. Stair is open on all levels, which is not in compliance with current building codes. A picket is missing from the top railing and other parts of the stair are loose or missing.

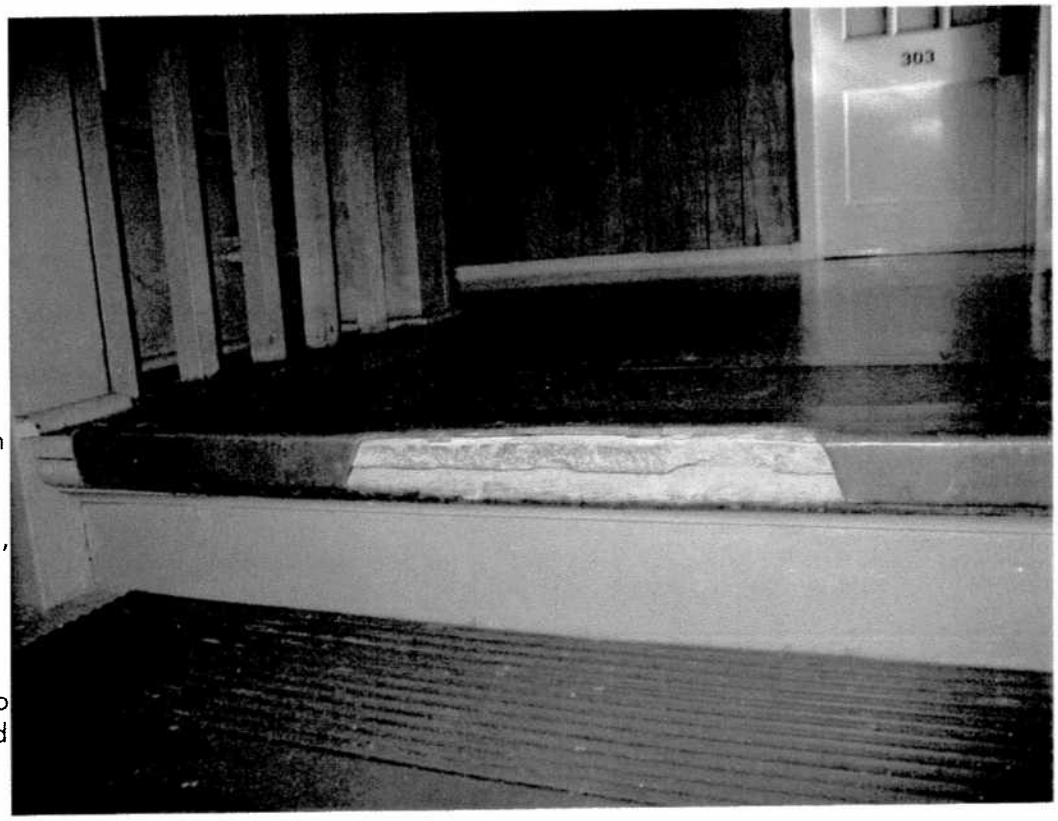



Photo 24. Typical worn stair nosing at the third floor. The plastic nosing and tread is broken, revealing the original wood floor underneath a layer of particle board. This particle board has been used to cover the original wood floor throughout the building.

Photo 25. Attic framing.

Photo 26. Attic framing.

Photo 27. Ceiling framing over set shop, formerly the kitchen.

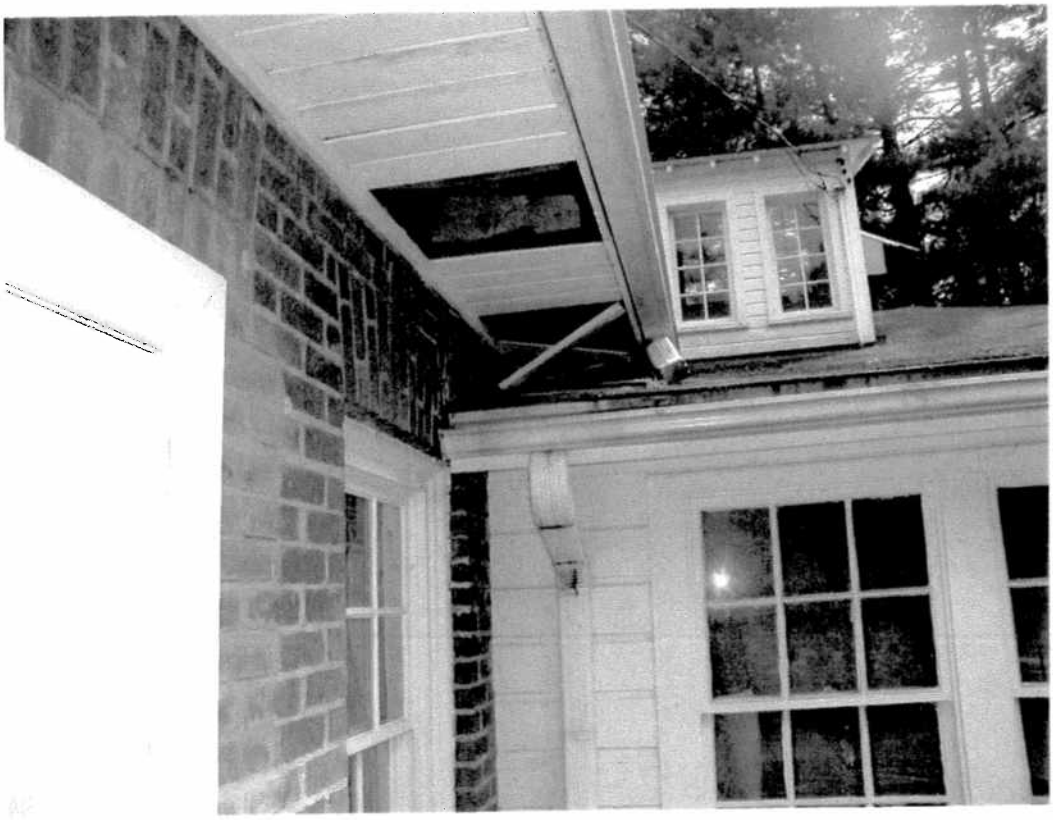


Photo 28. Soffit condition at rear former kitchen wing.

Photo 29. Lower basement area under set shop.

Photo 30. Lower basement level, mechanical room under set shop.

Photo 31. Crawlspace under basement level, now used for costume and prop storage, looking south.

Photo 32. Crawlspace under costume shop, looking east.

## STRUCTURAL CONDITION ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Kloesel Engineering, PA and Harris Architects PLLC. No destructive investigation was performed. While the building was constructed in phases, the construction methods used were similar with a wood framed roof, wood framed floors bearing on wood stud walls and brick bearing walls, and foundation brick walls and brick interior piers. The section to the rear that includes the original kitchen area is framed with both steel and wood members supporting the floors.

### Foundations

Foundation walls and interior piers are brick and probably have a brick or mortar footing. Spread footings composed of reinforced concrete likely supports the steel columns of the additions. Additional temporary shoring has been installed over time in specific locations, composed of non-pressure treated wood posts in direct contact with the ground or concrete slab in basements or crawlspaces.

### Basement and Lower Basement

As the building is on a sloping sight, the lower basement level at the north (rear) is at grade and then the first floor (two stories up) is just slightly above grade at the south (front) side. The lowest level, the lower basement has a slab-on-grade floor under the kitchen wing and is a high crawlspace under the dining room addition. This crawlspace continues under the basement of the 1921 addition, but is only one to two feet high and the east wall is partially under grade. The floor of the 1921 Addition is wood framed with some steel beams and columns.

Due to its close proximity to grade the wood framing and floor in the 1921 Basement level (former Dining Room) is in poor condition in some places and needs repairs. The area just inside the west door is in particular need of repair, although the whole floor systems needs to be evaluated in more detail, which is not possible without moving out all of the theatre props and costumes that are stored in that area.

### First Floor Framing

The first floor of the original building is framed with wood joists that span east-west between the brick exterior walls and interior wood beams. Joist pockets in the exterior walls receive the joists on the outer ends and a double row of beams run north-south underneath the corridor walls above. Wood sheathing and original tongue and groove wood floors are above.

Floor framing in the addition is composed of wood joists that span between the exterior brick walls and interior wood and steel beams. The perimeter brick foundation walls have joist pockets for the wood floor framing and the floors have wood sheathing and flooring on top of the joists.

### Second and Third Floor Framing

Framing of the second the third floors is the same with wood joists spanning east-west between brick exterior walls and interior loading bearing wood frame corridor walls. The floors were originally wood tongue and grove and have been covered with particle board. Walls and ceilings were originally lath and plaster and most of the walls have been covered over with pre-finished plywood paneling.

### Attic and Roof Framing

The south end roof appears properly designed and constructed with a walk-in attic. The roof joists are connected at the ridge with a nailer board and at the base to the ceiling joists. The attic joists are side by side with the roof joists and kickers are properly located, reducing the span of the roof rafters. (Roof joists not supported by a ridge beam have a tendency to sag along the ridgeline due to the thrust of the sloped members. The attachment of the roof rafter to the ceiling joists resists the thrust of the roof joists and thus eliminates the sag.)

The north end of the roof lacks the connection of the roof rafter to the ceiling joist. At some point, vertical members were added below the ridge, likely in an attempt to eliminate the sag in the roof. The vertical members are inadequate for the loads imposed. The north end roof also exhibits fire damage that has not been properly repaired. Several fire damaged roof rafters are sagging and a portion of the ridge was never replaced. Sagging in the roof tends to fail roof shingles by bending and cracking, thus reducing their life span.

The roof over the original kitchen wing is also framed in wood and is constructed of wood sheathing on wood rafters. In the main room two large wood trusses support the roof rafters and frame out an interior attic storage area and light monitor. The roof structure is exposed in this area while adjacent rooms have plaster ceilings.

### Structural Observations, Evaluations, and Recommendations

Three categories of structural problems where observed and are listed in order of importance:

1. Failure to direct water away from the foundation of the building.
2. Members that were substantially weakened by fire or decay due to prolonged exposure to water and moisture.
3. Members that were under-sized for the applied loads or assembled in an unstable configuration.

### Weakened or Failed Members

- Brick mortar joints in areas close to grade with improper drainage against the foundation have deteriorated and need to be re-pointed.

- Fire damaged attic framing needs proper repair and rafters need to have additional bracing to prevent lateral thrust.

- A portion of the floor in the costume storage area appears to have failed at the west exterior door. The failure corresponds to an area where vegetation is present in the gutter and the downspout is not adequately directed into a drain. It is likely the floor structure has rotted and fallen away from the supporting wall.

- Roof trusses in the original kitchen (now set shop) have begun imparting load to other portions of the building. Over time, wood members will sag and deflect. The wood trusses have steel adjustment rods meant to be tightened periodically over time to counteract the sag. This was not done and the trusses are sagging to a point where they are imparting loads to other parts of the structure. Because the other parts of the structure are not designed for this additional load, they are beginning to deflect also.

**Summary**

The structure exhibits no signs of distress due to its current use and therefore, the proposed use would not adversely affect the structure.

The primary problem affecting the structure is drainage of water away from the structure. Clogged gutters filled with vegetation, downspouts draining directly against the foundation walls, and exterior grade directing water against the building foundation were observed.

In general there are only a few localized structural deficiencies due to the original construction. These are localized areas that require strengthening or replacing of joist members and adding lateral thrust connections.

## BUILDING SYSTEMS ASSESSMENT

This assessment is based upon limited visual observations of existing conditions by Reece, Noland & McElrath, Inc., and Harris Architects PLLC.

### HVAC Systems

Existing Systems. Heat is provided by a Peerless cast iron sectional natural gas fired hot water boiler, located in the crawl space area of the original building with access from the west side. According to the state boiler inspection certificate, the boiler was installed in 1999. Cooling is provided by window air conditioning units located throughout the building. Ventilation for toilet rooms is provided by relatively new exhaust fans mounted on the east wall and soffit. Steam and condensate pipe insulation is damaged and deteriorating in the crawlspace. Controls are rudimentary. Ventilation and humidity control are inadequate in prop and costume storage areas. Set shop does not have adequate ventilation for a woodworking area.

Recommendations. For the proposed new use it will be desirable to have individual controls in many of the rooms. Install an entirely new system or convert the system to a four-pipe HVAC system using fan-coil units. Convert the boiler to a hot water boiler by removing steam trim and adjusting capacity if required by adding/removing sections and changing burner if required. Install a water chiller (probably outdoor packaged air-cooled chiller). Install new hot water and chilled water piping systems and pumps. Install new DDC controls. Upgrade ventilation throughout the building.

### Electrical Systems

Existing Systems. Existing electrical service is provided via three separate overhead service laterals from a pad-mounted transformer located behind Owen Theater. Electrical distribution inside the building is a hodgepodge of panels and fuse boxes. The wiring system does not meet current code. Lighting is old and not energy efficient. An Edwards hard-wired fire alarm system is provided, with manual pull stations and some automatic smoke detection. The detector in the boiler room area has been removed, and no smoke detection is provided in prop or costume storage areas.

Recommendations. Rework electrical system in its entirety to provide single service entry point and distribution to meet current codes. Replace all light fixtures with new energy efficient lighting, in keeping with the architectural character of the building where possible. Install a new addressable fire alarm system providing full area smoke or heat detection, especially in storage areas. Provide raceway/infrastructure for reinstallation of voice and data communications systems.

**Plumbing Systems**

Existing Systems. Existing plumbing systems consist of water, waste, and vent systems, all of which are in need of upgrade. Water service enters the building near the main entrance. It is not clear where building sewer exits the building. Hot water is provided by a Teledyne-Laars gas fired water heater, with storage tanks, and two 40-gallon electric water heaters. The building is not sprinkled. There are fire hose cabinets in the original building, although it is not clear where these cabinets are supplied from. Plumbing fixtures are not water-saving type, and generally do not meet accessibility codes.

Recommendations. Replace all existing fixtures with new piping and fixtures. Reuse existing gas water heater to provide domestic hot water if possible. Provide a fire sprinkler system per code assessment.

## PROPOSED REHABILITATION

The building is currently underutilized due to its condition and some rooms are simply closed off due to falling plaster and other problems. The building is used by the Access program for offices and by the Theater Department for faculty offices, classrooms, and shop and storage space. There are also two auxiliary functions: an apartment for a retired administrator and a snack shop. All of these uses have gone into the building with little planning and few alterations since the 1960s when the building was last used as a dormitory, with a few classrooms in the former dining room area in the basement.

Two options were studied for the use of this building:

**Offices and Classrooms:** Continuation of the current uses while updating the building to meet current codes and providing additional classrooms. This would be an extensive rehabilitation due to the condition of the building and requirements to bring the building up to code. This option was rejected because the existing structure of the building, with load bearing walls along each side of the corridors, restricts the width of classrooms and makes them inefficient. This use retained much of the space currently used by the Theater Department as it is used currently. Plans for this option are included for informational purposes at the end of this report.

**Conference Center:** Complete rehabilitation for use as a Conference Center with meeting and guest rooms. As this use is more closely related to the original use of the building, it is a good fit and this concept is presented in detail.

The proposed design includes 34 guest rooms and 3 meeting rooms and utilizes all of the existing square footage in the building. Guest rooms occupy roughly half of the original dormitory rooms with the other rooms split into two private bathrooms to serve each guest room. Meeting rooms occupy the original Dining Halls and kitchen spaces as follows:

Lower Basement

The lower basement level is developed as a new entrance & guest drop off area accessible from Bailey Street, with access to a new elevator core connecting all five levels. A small parking lot is shown where an existing storage shed is to be demolished. Service areas are located around to the sides of the 2-story original kitchen where they can be screened from the public.

A pull-in passenger drop-off and unloading area is provided under a new deck. Guests or conference attendees enter into a new lobby area and take the elevator to the first floor and to an office for registration.

The remainder of the Lower Basement level is relegated to mechanical, storage, and service areas for the kitchen above.

Basement

The basement level is developed for meeting room use. Three large meeting rooms are shown, two at 1,500 square feet and one at 1,000 sq. ft. Based on 15 sq. ft. per person occupancy, a maximum building code-permitted occupancy for this floor would be approximately 266 persons. New restrooms are provided for the maximum occupancy. The rooms adjacent to the West Meeting Room are utilized as catering kitchen and utility areas with access to grade at a new south service porch.

The existing wood-sided enclosure at the rear porch could be removed to restore the porch feature. The porch would open out onto a new deck allowing for outside gathering during conference break-outs. The bridge to Bailey Street and the sidewalk would be rebuilt. New stairs to the parking area are also shown.

First Floor

The original (south) section of the main floor serves as Lobby and Registration area for the conference center. Most of the work in this area is restorative in nature, with minimal alterations to create a new office and public restrooms.

A new accessible ramp is shown coming into the northeast corner of the Sunroom where the existing ramp is currently. The Ice Cream Shop as well as the existing residential apartment are scheduled to remain unaltered.

The area of the 1921 addition houses eight guest rooms, all with private baths. The typical bath layout shows an existing room subdivided for two bathrooms. Each bathroom has an anteroom with a large vanity and an adjacent coat rack. The water closet and tub/shower are in a separate room to allow for shared guest use. At least half of the bath areas have a window. This pattern would be repeated on the upper floors. The guest rooms will accommodate a queen bed, bedside tables, a TV wardrobe, two guest chairs and a table.

The room adjacent to the elevator will incorporate maid and janitor storage as well as a vending/ice machine area.

Second Floor

The Second Floor has thirteen guest rooms, all with private baths. The layout for the First Floor rooms would be repeated here. At the southwest corner, the room is separated by the existing stair and cannot easily accommodate a bath. One suggestion would be to use this room as a lounge area for the entire floor, allowing for small group gathering. A small kitchenette could be accommodated. Another option would be to combine this room with Guest Room 201 and create a large suite that would face the quad.

Third Floor

The Third Floor has thirteen guest rooms, all with private baths. The layout for the Second Floor rooms would be repeated here with the exception of the portion of the floor in the original section that is more limited due to the intrusion of dormers. Here, guestrooms 302-305 would be a little tighter but appear to accommodate the same features and furnishings.

As on the Second Floor, the room at the southwest corner is separated by the existing stair and cannot easily accommodate a bath. Again, the room could be used as a lounge area for the entire floor or could be combined with Guest Room 301 and create a large suite which would face the quad.

## BUILDING CODE ASSESSMENT

Three building codes are in effect for use in North Carolina for existing buildings, and while these cannot be combined, all should be studied for the best overall approach and application for a project. These are:

- 2002 North Carolina Building Code is based on the International Building Code with specific North Carolina revisions. This code is used primarily for new construction projects and will have new revisions effective July 1, 2006.
- Chapter 34 – Existing Buildings of the 2002 NC Building Code allows a scoring system that balances acceptance of certain existing conditions with the introduction of safety features such as sprinkler systems and smoke and fire alarms.
- 2006 North Carolina Rehabilitation Code became effective statewide as of January 1, 2006. This code has been in effect in certain jurisdictions in the state as a pilot code for several years. It is considered a "new generation" of building codes as it approaches a existing building project in a more comprehensive manner.

The applicability of each of the code alternatives was studied and it was determined that the Rehabilitation code allows the best protection of historic features while making the building safe for a change of use. Listing on the National Register also allows for special provisions per NC Rehabilitation Code Section 1.33 – Historic Buildings

Current Occupancy Type: B – Business. Offices and classrooms; 100 sq. ft. gross/occupant

Proposed Occupancy: Mixed Occupancy for Conference Center and Hotel.

- A-2 – Assembly. Conference center at Basement Level; 15 sq. ft. net/occupant

R-1 – Residential. Conference hotel 1st, 2nd, 3rd floors; 200 sq. ft. gross/occupant

Construction Type: 3

- Exterior walls of non-combustible masonry; interior floor and roof structures of wood construction.
- (4) stories high over crawl space with sub-basement below NW addition.

### General Requirements

The proposed rehabilitation of the building as a conference center / hotel will require adherence to "Change of Use" provisions in accordance with the NC Building Code and the NC Rehabilitation Code.

Preliminary code research indicates that the use of the NC Rehabilitation Code – in force as of January 1, 2006 – will allow for the preservation of significant architectural features that otherwise may not be permitted under the current NC Building Code. These provisions will be especially important should the project be developed privately with the use of rehabilitation tax credits.

Certified Historic Buildings (1.33)

1. Listing on National Register allows for special provisions per NC Rehab Code Section 1.33 – Historic Buildings:
   - Original or replica materials and original methods of construction may be used.
   - Exterior walls not required to meet requirements for fire resistive construction.
   - One-hour fire resistive construction not required where existing finish is lath and plaster.
   - Existing door openings and corridor and stairway widths less than required may be approved as allowed by building inspector.
   - Existing front or main exit doors not required to swing in direction of travel when serving less than 50 people or when other approved exits are provided.
   - Existing or replica hardware shall be permitted provided no life safety hazard and meets intent of Accessibility Code.
   - Transoms in corridors and other fire rated walls may remain.
   - Existing historic finishes may be retained.
   - Stairway enclosures may be omitted for portion of stair serving first and second floor.
   - Original riser height and tread width may remain for stairs being repaired or replaced.
   - Existing handrails may remain or replaced to match.
   - Existing 30" guardrails may remain if drop off less than 48".
   - Existing ceiling heights may remain.
2. Special change of use provision for buildings undergoing rehabilitation per Secretary's Standards.
   - Floor area for historic buildings with change of use to higher hazard category may exceed allowable areas for proposed use group 50%.

**PROPOSED SCOPE OF WORK**

**Demolition/Removal**

- Fire Escapes (3)
- Plywood paneling on almost every wall on 2 (except lobby, sunroom, and snack shop), 3, and 4.
- Particle board w/ vinyl tile and some carpet on all floors (1,2,3, &4). Includes risers on both sets of steps.
- Closets.
- Restrooms.
- Wooden deck on north side of the building.

**Site**

- Develop vehicular entrance on north side of building with parking lot.
- Pedestrian and service access to building.
- Allowance for landscaping.

**Exterior**

- Roof is less than 1 yr old on main section. Replace roof over rear sections shop.
- Clean and spot repointing of brick (very limited). Repair masonry at fire escapes.
- Restore all windows (wood, double hung).
- Install operational interior storm windows at all windows.
- Restore all wood doors.
- Repair wood trim, soffits, etc. Prep and paint.
- Replace gutters, downspouts and underground drains to daylight or storm sewer.

**Interior**

- Repair plaster walls and ceilings. Prep and paint.
- Repair wood trim and doors. Prep and paint.
- Paint windows (see Exterior).
- Upgrade both stairs, which will probably involve rebuilding portions of them.
- New flooring. Original wood floors exist under particle board, however, we are not assuming they can be restored. Carpet in offices and public spaces, meeting rooms, guest rooms, ceramic tile in restrooms and bathrooms.
- Install elevator and make changes for new rear entry.
- Renovate first floor spaces for meeting rooms.
- New public restrooms.
- Renovate rooms for guest rooms with new bathrooms.

**Building Systems**

- HVAC – complete new systems.
- Electrical – complete upgrades including wiring, fixtures, also communications.
- Plumbing – complete upgrades.
- Fire Protection – sprinklers throughout, fire alarm.
- Structural – see Preliminary Report, some spot repairs will be needed. Some structural strengthening may be needed for areas with Meeting Rooms.

## COST ESTIMATE

Based upon current market information and figures provided by Capital Building Consultants, a state of probable cost is as follows. These costs do not include asbestos abatement or interior furnishings.

| CSI Division | Unit Cost | Unit | Total Incl. Overhead & Profit |
|---|---|---|---|
| General Conditions | 10% | | $330,179.39 |
| A Structural | 2.16 | /S.F. | $63,575.28 |
| B Exterior Construction | 13.40 | /S.F. | $394,402.20 |
| Thermal & Moisture Protection | 3.86 | /S.F. | $113,611.38 |
| C Interior Construction | 24.36 | /S.F. | $716,987.88 |
| Elevator | 4.82 | /S.F. | $141,867.06 |
| D Mechanical System | 29.40 | /S.F. | $865,330.20 |
| Electrical System | 19.95 | /S.F. | $587,188.35 |
| E Special Construction | 12.45 | /S.F. | $366,440.85 |
| G Site Work | 1.78 | /S.F. | $52,390.74 |
| **TOTAL** (including General Conditions, Overhead & Profit) | | | **$3,631,973.00** |
| Architectural & Engineering Fees | 9% | | $ 326,877.00 |
| Contingency | 20% | | $791,770.00 |
| **TOTAL ESTIMATED COST** for 29,433 S.F. | $161.40 | /S.F. | **$4,750,620.00** |